

# HOME CINEMA

HIGH-PERFORMANCE SOUND & VISION

## Choice

### REVIEWS

Yamaha AVR  
Optoma Full HD/  
Darbee projector  
Polk MagniFi  
soundbar  
Sony X800 4K  
Blu-ray player  
GoldenEar sub

# SCREEN OF DREAMS!

Is LG's 65in E7 OLED  
the best Ultra HD TV  
you can buy?

## Curved contender

Samsung Q8C TV  
adds style to HDR

**PLAYER  
POWER**  
FLAGSHIP OPPO  
BLOWS US AWAY

### FINAL FANTASY

The *Resident Evil*  
franchise bows  
out on Ultra HD  
Blu-ray, p96

**PLUS!**  
LG SJ9  
Dolby Atmos  
soundbar  
aims high



### FILM & TV

- LEGO BATMAN
- PATRIOTS DAY
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**INSIDE** BUYER'S GUIDE → DOCTOR WHO GOES BINAURAL → GOOGLE HOME  
→ COLLECTING... LIAM NEESON! → READER'S ROOM → OPINION → COMPETITIONS

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# YAMAHA

## Wireless Streaming Adapter

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[uk.yamaha.com](http://uk.yamaha.com)

email [jake.stevenson@music.yamaha.com](mailto:jake.stevenson@music.yamaha.com) for details



# HOME CINEMA Choice

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# Welcome

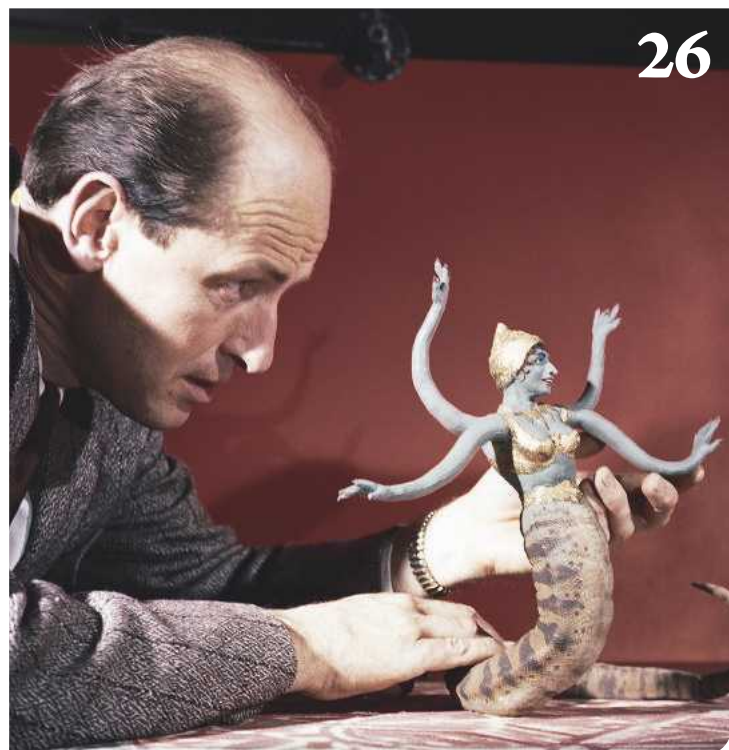
According to a Samsung Europe visual display honcho, developments in TV technology have got to the point where image quality differences between models are less apparent (see p9). Thus, the argument continues, brands should focus on ways to differentiate their wares from the competition – design, user experience, audio innovation. I agree to a point. As TVs get larger, and interactive talents progress, styling and operation becomes more important. **A market where all TVs look and act the same is a dull one.** On the other hand, you only need to put two competitor TVs next to each other, running the same content, to discern differences in how they present it. Often these will be borne from the varying systems used to illuminate a screen, but can also come from processing philosophies, colour handling, HDR tone mapping, etc. This issue we look at LG E7 OLED and Samsung Q8C QLED TVs. Each offers something different. Which is best? Read on and find out...



*Mark Craven*  
Editor



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**John Archer:**  
The UK's most experienced TV tester cut his teeth as an early HCC staffer



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A former editor of *What Video* magazine, now a certified home cinema audio buff

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# Emit.

# Enter the World of High-End Performance.



The new Dynaudio Emit series is the latest model range from Dynaudio and was conceived as an entry level high end loudspeaker series incorporating extraordinary levels of performance and technical innovation in an attractive package suitable for almost any level of home cinema amplification.

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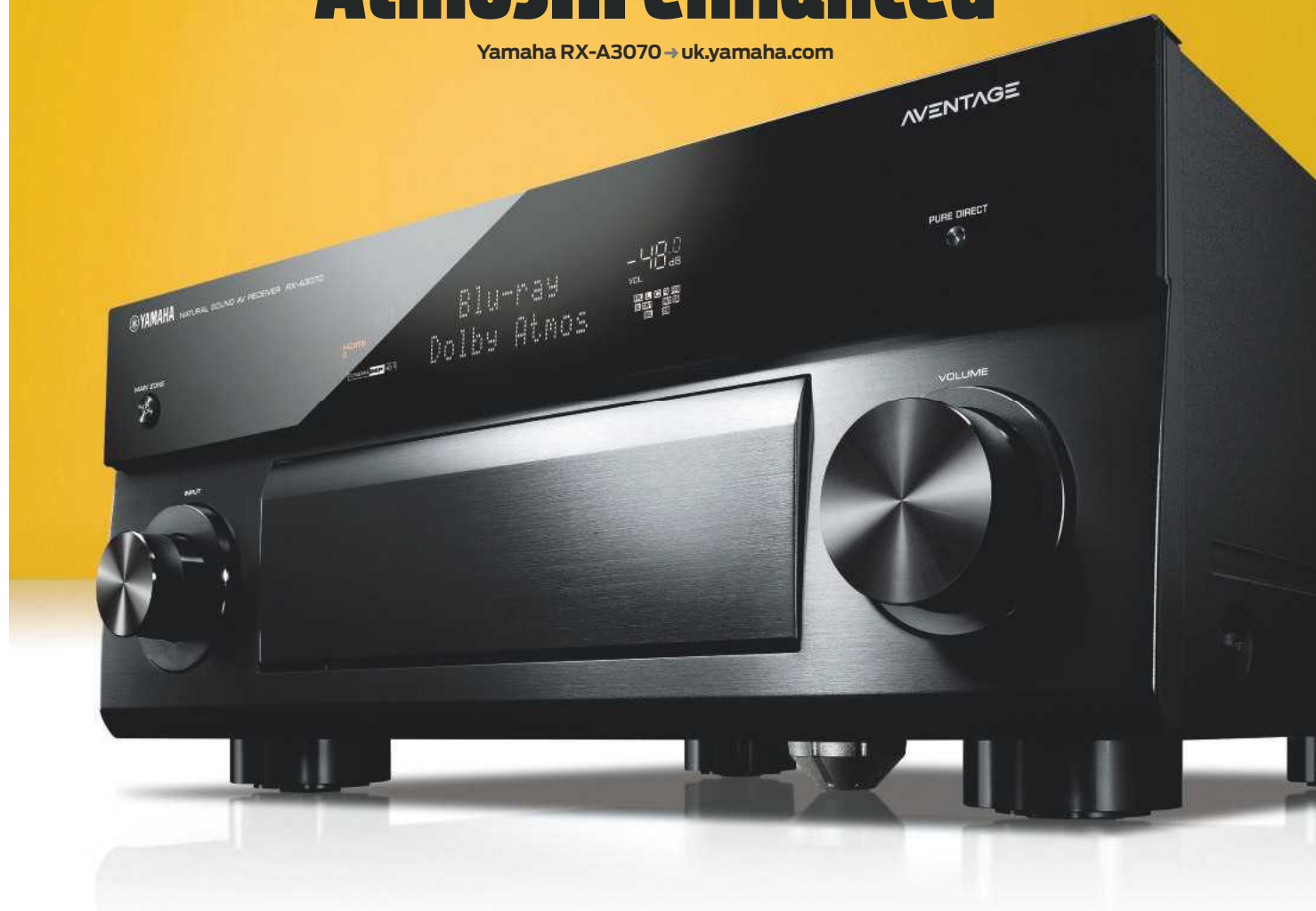


# BULLETIN

→ **NEWS HIGHLIGHTS** LOEWE OLED TV for followers of fashion **DENON** HEOS AV receiver cuts the cable **EMOTIVA** American audio brand to make UK debut **SONY** XE70 range promises HDR for all **WEBWATCH** Click here for trailers and tech **NEWS X10** The hottest news stories in bite-sized chunks **LOGAN** Mutant mayhem in Ultra HD... and monochrome **& MORE!**

## Atmos... enhanced

Yamaha RX-A3070 → [uk.yamaha.com](http://uk.yamaha.com)




Yamaha has unwrapped its new five-strong line of AVENTAGE AV receivers, featuring Dolby Vision HDR passthrough and an 'Enhanced' Cinema DSP mode for use with Dolby Atmos and DTS:X soundmixes. Top of the range is the nine-channel RX-A3070 (pictured) due September, which also includes balanced stereo XLR inputs for use with audiophile sources and 11.2-channel processing/pre-outs.

### HCC ONLINE...

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# 4K OLED for Flappers...

Loewe bild 9 → [www.loewe.tv](http://www.loewe.tv)



Loewe's bild 9, available in either Graphite Grey or Amber Gold (pictured) finishes, apparently draws its design inspiration from the Art Deco and Bauhaus movements of the 'roaring Twenties' – thankfully it packs more up-to-date tech. Its 4K OLED panel supports HDR 10, HLG and Dolby Vision formats, while its integrated 120W soundbar also features a 5.1 decoder for use with Loewe's Klang speakers. Choose from 55in (£6,990) or 65in (£8,990) models, all with various stand/mount options.



## Emotiva makes a move



American AV brand Emotiva is bringing its hardware range to the UK through distributor Karma-

AV, promising 'prices significantly below those of comparable products.' Making the trip across the Atlantic will be Emotiva's X-Series line, including a seven-channel processor and balanced monoblock amps, plus the mid-market BasX range, which features the A-700 seven-channel power amp (£770) and seven-channel MC-700 processor (£780).

[www.karma-av.co.uk](http://www.karma-av.co.uk)

## 100 not out for Acoustic Energy



Speaker marque Acoustic Energy, fresh from a corporate shake-up that has seen it return to British

ownership, has announced a revised AE100 Series. The range features new AE109 floorstander (£500) and AE100 standmount (£200, pictured) models, claiming improvements over their original 1996 predecessors. Following in the Summer will be a centre channel (AE107) and subwoofer (AE108), enabling creation of value-for-money 5.1 systems. [www.acoustic-energy.co.uk](http://www.acoustic-energy.co.uk)

## Playlist...

Team HCC spins up its disc picks of the month

### The Great Wall (All-region BD)

It may be absolutely bonkers, but director Zhang Yimou's monster movie is also one of the most visually spectacular Blu-ray blockbusters you'll ever see.



### Taboo: Series One (Region B BD)



Tom Hardy is at his monosyllabic, mad-eyed best in this dark and twisted BBC period drama, now available to own on BD.

### Unforgotten S1/S2 (ITV Encore/Sky)



Low-key but supremely well-written police procedural worth a watch for anyone suffering *Broadchurch* withdrawal.

### Delirium (Region B BD)



A good-looking hi-def outing for this late period *giallo* – shame about the lack of extras, though.

### La La Land (Region B BD)



Soaring Dolby Atmos sonics and lush 2.55:1 CinemaScope visuals ensure that this award-winning musical sings on Blu-ray.



## Panasonic certifies OLED

EZ models get stamp of approval from THX and Ultra HD Alliance

Panasonic's twin OLED charge for 2017 – the EZ1002 and EZ952 models – are arriving better late than never to UK stores carrying THX and UHD Alliance certification, following a 'rigorous tuning process' in collaboration with Hollywood post-production specialist Deluxe.

While other TV brands hit retailers in Spring with their own high-spec OLED and LCD TVs following traditional launches at the CES expo, Panasonic's OLED sets have been slower to arrive.

A reason for the delay is that final certification of their picture-quality prowess was only achieved in early May.

### The Deluxe treatment

Colourists and image boffins across Deluxe's various subsidiaries were tasked with assessing and fine-tuning the performance of both the flagship EZ1002 and step-down EZ952. The company claims to be a pioneer in HDR, and worked on 13 of the films nominated for this year's Academy Awards.

The relationship has borne fruit, with THX 4K and Ultra HD Alliance approval earned for the models that will sit above Panasonic's LED/LCDs in this year's pecking order.

Deluxe has also assessed the '4K Pro'-labelled EZ1002 for use as a reference monitor for colour grading sessions, working on client material including blockbuster movies and television series.

Chief Creative Officer of Deluxe, Stefan Sonnenfeld, believes the secret to a premium picture experience is accurate colour handling. 'Colour has a latent power – its ability to evoke emotions that help filmmakers tell stories. If you aren't seeing colour as it was intended, you aren't getting the experience that was intended.'

'Until now there hasn't been an affordable way to present multiple formats consistently in a way that we can approve. The Panasonic EZ1002 TV is a major breakthrough, delivering consistently with the parameters and characteristics we see on professional-grade monitors that our colourists are referencing.'

'We couldn't be more excited to work with a partner like Panasonic who recognises the seriousness of what we require.'

The EZ1002 is launching as a 65in model, with a 77in megascreen version also due to go through certification before arriving this Autumn. The EZ952 is offered at both 65in and 55in.

## At the 'plex...

Heading out to see a flick?  
Catch these this month

### Transformers: The Last Knight



June 22: The fifth film following the 'robots in disguise' throws King Arthur, Nazis and Anthony Hopkins into the mix. Whatever it might all add up to, with Michael Bay at the helm you can be sure it involves a lot of slow-mo explosions...

### Baby Driver

June 28: Writer-director Edgar Wright pays homage to classic heist movies with this action-romcom about a young getaway driver who cruises the streets to the beat of his own soundtrack.

### Spider-Man: Homecoming



July 07: After his spectacular debut in *Captain America: Civil War*, the new-look Spidey (Tom Holland) will be struggling to balance his school life with being a superhero and battling the Vulture (Michael Keaton) in this solo outing.

# The future is in The Frame

Picture quality discussion is obsolete after QLED, insists Samsung

Samsung is looking to design innovation, rather than image technology, to drive future TV sales. So says Michael Zoller, VP of visual displays for Samsung Europe. Speaking at IFA's recent Global Press Conference in Portugal, Zoller insisted that the introduction of Quantum Dot QLED LCD panel technology has made discussions about picture quality obsolete.

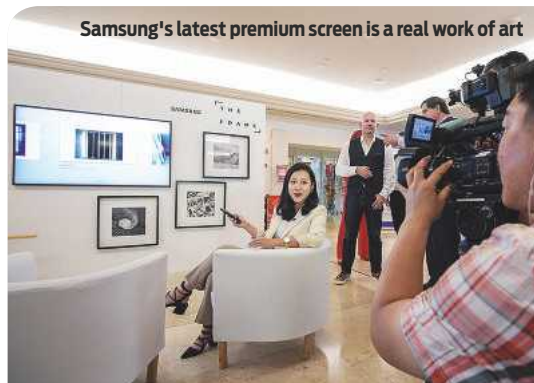
By way of evidence, Zoller points to The Frame, a remarkable new screen that offers buyers a variety of installation options. The screen looks less like a telly and more like futuristic home furnishing.

A collaboration with Swiss designer Yves Behar, The Frame is said to present consumers with a range of lifestyle choices. A 'No Gap' wall-mount lets the TV be mounted flush against a wall, hung like a picture, while a 'Studio Stand' allows the panel to be placed like an easel.

'We know that image quality is very important,' says Zoller. 'QLED with Quantum Dot delivers the greatest experience on any TV: 100 per cent colour volume; up to 2,000 nits; the greatest contrast in any lighting condition – but we have now reached a level where the improvements have become less and less visible to the non-specialist.'

Samsung's 55in Frame TV will command a price premium for its novelty, but for those that would rather disguise their flatscreen as a literal work of art, it may be a price worth paying.

The Frame looks even more like a conventional picture frame when hanging on a wall with Art Mode activated. Users can select custom-designed digital



art pieces for display. At launch, Samsung will offer more than 100 pieces in 10 different categories (landscape, architecture, wildlife, etc).

The screen can be further customised with switchable bezels. Zoller suggests that the TV business has reached the same level of saturation as the car industry, which he maintains used to

trade on horsepower and mileage, but now focuses on features and aesthetics.

Fuelling the change in form factors is the development of an 'invisible' fibre optic cable that allows the panel to be effectively separated from sound system and tuner. 'With our invisible optical cable solution, you can place our One Connect Box up to 50m away from the TV, connected to four 4K sources,' says Zoller.

A focus on design would seem to make sense when the rapid adoption of smart services and UHD is factored into sales projections. These technologies are expected to become ubiquitous and pre-eminent (respectively), according to research from GfK.

For instance, 60 per cent of all TVs sold in 2016 were network connectable, a figure set to rise to 73 per cent in 2020.

Ultra HD is tipped to follow a similar path. In 2016, 4K TVs accounted for just 23 per cent of global sales, but should reach 52 per cent in 2020.

Interestingly, GfK refused to speculate on OLED TV growth at the event, saying there were just too many variables at the moment. The TV display technology has seen an influx of brands, but limited panel production is expected to keep prices high.

## XE70 TVs target HDR mass-market

Sony brings a variety of proprietary tech to this Summer's affordable 4K flatscreen range

Sony has launched a 4K HDR TV range for those seeking to 'step into' the new era of Ultra HD Blu-ray and streamed delights.

The XE70 Series will be available from July in sizes ranging from 43in to 65in, with prices beginning at £800. The TVs use an edge LED array with frame dimming to illuminate their 3,840 x 2,160 panels. Format support includes HDR 10, but not Dolby Vision or other variants. 4K clients for Netflix and Amazon are on board. All three HDMI inputs are HDCP 2.2-enabled.

In place of Sony's top-line Triluminos and X-Tended Dynamic Range Pro technologies, the

sets employ Live Colour and Dynamic Contrast Enhancer processing for colour and contrast improvements. Motionflow XR tech is on hand to help with fast moving images.

Away from imagery, the XE70s feature a similar cable-management system within their desktop stands as on the brand's higher-spec designs; narrow-frame styling with an aluminium finish; a 2 x 10W speaker system with ClearAudio+ processing; and a Linux-powered (not Android) user interface. [www.sony.co.uk](http://www.sony.co.uk)

Image fettle is provided by the brand's 4K X-Reality PRO processor







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## Extras...

Small items that could make a big impression...

### The Art of Ghost in the Shell



While opinion remains split on Hollywood's recent live-action remake of the anime

classic, the one thing everybody agrees on is that it looks fantastic. With its mix of concept art, on-set photos and interviews, this magnificent 166-page hardback (priced £30) is a testament to the work that went into creating the world of the film and the characters that inhabit it.

### Jon Snow: Battle of the Bastards Bust



Here's one for all of the *Game of Thrones* fans out there. Dark Horse has teamed up with HBO to

make a limited edition 6in bust showing Jon Snow wielding his sword Longclaw during the pulse-pounding penultimate episode of the show's sixth season. You can grab the bust from August, priced around £80.

### Wonder Woman: The Ultimate Guide to the Amazon Warrior



DK has used the recent *Wonder Woman* movie as an excuse to release an updated

version of its 'Ultimate Guide' to the superhero. Following the usual template, this £18 tome explores the character's origins, friends and enemies, and key comic book storylines – now bringing it up to date with last year's *Rebirth* reboot of the entire DC Comics universe.

# IFA preps for 2017 expo

Launch conference is heavy on statistics and teeth-brushing apps...

More than half of all VR owners intend to use their virtual reality headsets to watch video. That was just one of a number of (sometimes startling) facts to come from the organisers of Europe's leading tech show, IFA, at IFA GPC 2017.

As a precursor to this year's Berlin extravaganza, which runs September 1-6, IFA and its partners held a two-day briefing in Portugal on trends and developments, and naturally HCC was there. On offer was a blizzard of stats and market predictions.

At the event, market researchers from GfK proclaimed the future still bright for Virtual Reality technology. While HCC can't endorse VR as a replacement for a proper AV system (because that would just be plain daft), we can understand why a survey of UK users showed that 70 per cent named gaming as the main reason to don their headset. Perhaps curiously, 52 per cent were also interested in the technology for education, while 51 per cent hoped to employ it for communication. Travel planning (presumably scoping out a hotel before booking, checking locales) polled a 48 per cent use. It seems the appeal of VR is varied.

## Bigger screens, better sales

IFA GPC 2017 predicted that some 230million TVs will be sold worldwide in 2017 – a useful fact should that crop up at your next pub quiz. Sales are expected to climb to 243million in 2018, and 259million by 2020.

Driving this steady growth are buyers in the Asia-Pacific region. By 2020, some 102m sets will be sold there. This compares to relatively flat sales of 46m and 35m in Western Europe and North America respectively.

The good news for home cinema fans is that interest in larger screen sizes continues to grow, which will likely translate to more buying choice and competitive prices. Last year, 18 per cent (that's 40.7m) screens were sold in the 50-59in range, while 60in and above accounted for just five per cent (11.6m). This year, around 50m 50-something TVs



**Jürgen Boyny: 'Security and privacy are big concerns with connected devices'**

are expected to be sold, with 60in+ models rising to 16.3m (seven per cent). And come 2020, 11 per cent of the global market will consist

of TVs 60in or larger.

The Chinese market is fast becoming as big as North America. By 2018, both will share roughly a quarter of the overall consumer electronics and mobile tech pie. Western Europe combined follows at 16 per cent. The value of the global CE/mobile market? An eye-watering \$945 billion.

## Trusting technology

Audio is also on the rise, but not via the usual hi-fi brands. The so-called vinyl renaissance can only go so far – instead, the big growth is coming through AI-infused smart speakers from the likes of Amazon and Google (see p67). The relative affordability of these gadgets leads to a staggering predicted sales figure of 60million units by 2020.

There is a caveat, though. Consumers need to trust the technology, HCC was told by GfK's Global Director of Consumer Electronics, Jürgen Boyny: 'Security and privacy are big concerns with connected devices.' Scares that have seen cameras vanish from connected TVs are likely to haunt speakers, too.

Not that Philips seems concerned. The company used the IFA launch party to unveil an Internet of Teeth upgrade to its DiamondClean electric toothbrush, which will use sensors in the head to enable brushers to monitor cleaning coverage on an app. Well, why not?

As for IFA itself, visitors to this Summer's show are expected to notice some changes, in what is being described as the biggest reshuffle for a decade. The big new attraction will be IFA Next, a hall devoted to tech startups and research labs, strategically located at the heart of the Berlin Messe.

The organisers are also launching a new sister show, called IFA Global Markets, which will provide a platform for components for future products. IFA Global Markets will run from September 3-6, at Station Berlin near Potsdamer Platz. A shuttle service will transport visitors between the new event and the main expo.

Finally, to kick things off on August 31, German pop combo Yello will be playing a concert in the Berlin Messe's Summer Garden. Team HCC will be packing its dancing shoes.





## This month's top 10 news stories in handy, bite-sized chunks...



### 1 Let's get ready to rumble

Empire Cinemas has opened two complete D-BOX motion recliner theatres in its new Empire Cinemas Ipswich complex. This marks the first time that D-BOX has equipped two entire auditoriums with its rocking-n-rumbling seats. Jon Nutton, Marketing Director of Empire Cinemas, stated: '[D-Box's] innovative technology gives us an edge in a very competitive market and is completely in line with our mission to provide moviegoers with the ultimate cinema experience.'

### 2 Faster 4K

LG has demonstrated 4K high-frame-rate content at the 10th SES Industry Days conference in Luxembourg. The 4K HFR material was transmitted live via satellite and displayed on an LG OLED TV using prototype HFR software. The new technology can display 4K content at up to 120 frames per second.

### 3 Kodi crackdown continues

One of the biggest and oldest Kodi add-ons has been discontinued. Navi-X has been supplying content for the open-source video player since 2007, but its developers have voluntarily shut it down citing 'the current legal climate surrounding Kodi' as the main reason for their decision. The Navi-X team also hit out at 'leeches' trying to profit from the hard work of Kodi developers by distributing illegal content.

### 4 4K classics on the way

Looking for some classic films to add to your 4K Blu-ray library? Then you'll be thrilled to learn that *The Bridge on the River Kwai*, *Close Encounters of the Third Kind*, *Blade Runner* and *E.T.* are all set to debut on the format later this year.

### 5 The Boss goes live in MQA

Live music e-tailer nugs.net has added MQA format support to its digital purchase model, kicking things off with concerts from Bruce Springsteen and Metallica, with the likes of Pearl Jam and Red Hot Chili Peppers to follow. MQA now appears as an option under the 'HD-Audio' tab, alongside 24-bit FLAC and ALAC versions.

### 6 Dolby Vision feeling Furious

*The Fate of the Furious* will be joining the line-up of Ultra HD Blu-rays with Dolby Vision when it makes its disc debut in the US on July 11. Also confirmed for a US release on 4K BD with Dolby Vision this Summer are *Power Rangers* (June 27) and *Resident Evil: Vendetta* (July 18).

### 7 Arcam aims for excellence

AV honcho Arcam has certified 32 UK retailers as 'Centres of Cinematic Excellence', highlighting those that offer a permanent Dolby Atmos/DTS:X demonstration room (with accompanying 4K visuals) using Arcam electronics and Dirac room/speaker calibration. To find your nearest audio-visual superstore that meets Arcam's lofty standards, visit [www.arcam.co.uk/find-home-cinema-centre](http://www.arcam.co.uk/find-home-cinema-centre).

### 8 Pirates jailed

Four men have been jailed in Sweden for running a network of pirate sites. The quartet will serve between six and ten months in prison and have been ordered to pay damages of \$147,000 for their part in running the streaming portal Dreamfilm, which reportedly accounted for 25 per cent of online viewing in Sweden. Blimey!

### 9 Amazon goes live

Amazon is adding live TV channels to its Prime Video service – but users will have to pay more to access them. So, on top of the yearly membership, subscribers will soon be able to pay an extra £6.99 a month for Eurosport or £4.99 a month for the Discovery Channel. We're not sure if it will give the people at Now TV sleepless nights.

### 10 Blu-ray shocker!

Arrow Video has revealed that John Frankenheimer's action-packed crime film *Ronin* will be joining the label's Blu-ray line-up this August. Arrow has produced a new 4K restoration of the film from the original camera negative for the release. The same month also sees a Blu-ray outing for Richard O'Brien's 1981 *Rocky Horror Picture Show* sequel *Shock Treatment*. As well as offering new extras, the Blu-ray digipack will be available in a choice of two covers.



## Premiere...

What's happening in the world of TV and films...

### Dredd takes aim at TV



Grumpy future cop Judge Dredd has his sights set on smallscreen success after failing to set the world alight with two previous trips to the cinema. *2000 A.D.* publisher Rebellion has partnered with studio IM Global to develop a 'high-end TV series' called *Judge Dredd: Mega-City One* to following the capers of Dredd and his fellow law-keepers.

### Burn the Witch

Radiohead frontman Thom Yorke will be composing the score for Luca Guadagnino's upcoming remake of the 1977 horror classic *Suspria*. The cast includes Dakota Johnson and Chloe Grace Moretz.

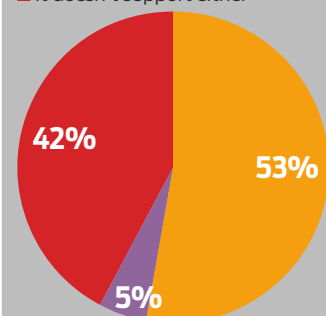
### To Hell and back

It appears we finally have the reason why Guillermo del Toro won't be completing his *Hellboy* movie trilogy. Comic book creator Mike Mignola has announced a new R-rated reboot titled *Hellboy: Rise of the Blood Queen* that is set to be directed by Neil Marshall and star David Harbour as its hero.

## We asked...

### Does your current AV receiver support Dolby Atmos and DTS:X?

- It supports both formats
- It only supports Dolby Atmos
- It doesn't support either



Results from [www.homecinemachoice.com](http://www.homecinemachoice.com)  
Go online for more polling action

# Wolverine's last stand...

Logan → Twentieth Century Fox Home Entertainment → DVD/Blu-ray/Ultra HD Blu-ray

Hugh Jackman waves farewell to Wolverine with this brutal third and final outing for the character, set in a near future where the X-Men are no more and mutants as a whole are facing extinction. *Logan* claws its way onto Digital Download on June 24, followed by DVD, Blu-ray and Ultra HD Blu-ray releases on July 10. As well as a documentary, deleted scenes and commentary by director James Mangold, the BD and 4K platters come bundled with *Logan Noir*, an exclusive black-and-white version of the superhero hit.





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## Face to Face

Topics of discussion on the HCC Facebook page

### On Sony's Luc Besson 4K Blu-ray releases...



I have just GOT to upgrade to 4K. Both [*Leon: The Professional* and *The Fifth Element*] are excellent films.  
Steve Old

*Leon* is going to be a Best Buy exclusive. Sob.  
Mark E. Ramsman

Not forever. I will buy both, but wish they had the original soundmixes.  
Mike Wadkins

### What you're watching on your home cinema...



*Unforgiven* on 4K disc followed by *Hacksaw Ridge* on Blu-ray.  
Chris Starr

*Underworld: Blood Wars* on Blu-ray – in about five minutes from now!  
Pat McConnell

All about sport this weekend – Monaco GP, Indy 500, FA Cup and French Open. Happy days!  
Richard Gaunt

Been working through the stunning transfers of *The Mummy Ultra HD* set. *Mummy Returns* last night and trying to watch the third one [*The Mummy: Tomb of the Dragon Emperor*] but remembering it wasn't that good...  
Rich Griffiths



Revisiting some old faves: *The Road* and *I am Legend*.  
Tony Farrell

Just went to see *Alien: Covenant* and walked out after five minutes and got a refund. It was being projected in the wrong aspect ratio – the top, bottom and sides were cropped!  
Barrie Head



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# Back of the 'net

Trailers, technology and more to check out on the web



## This is Dynamation!

This promotional film to tie into Ray Harryhausen's *The 7th Voyage of Sinbad* (see p26) was designed to excite contemporary audiences about the possibilities of the VFX master's animation technique. The fact that it doesn't really explain what Dynamation is probably wasn't deemed important...  
[youtu.be/arq6fTGkC6E](http://youtu.be/arq6fTGkC6E)



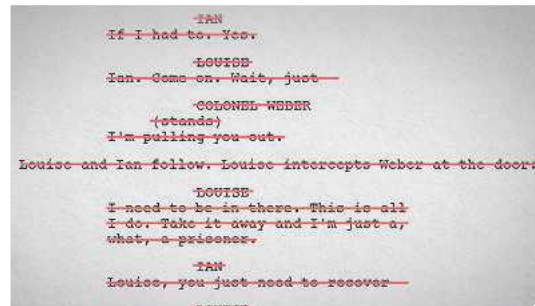
## Who's there?

Over on BBC's iPlayer service, a binaural version of *Doctor Who* episode *Knock Knock*, starring David Suchet, is available to stream until July. Search for 'Doctor Who Enhanced' and have your headphones at the ready. For more on the Beeb's binaural developments, head to p32.  
[www.bbc.co.uk/iplayer](http://www.bbc.co.uk/iplayer)



## More marmalade, please

2014's *Paddington* was an enjoyable, family-friendly flick that brought the fruit preserve-obsessed bear to life with clever CGI and animatronics. This sequel, due in November, looks set to retain the cuddly ethos, and A-list British acting talent. Respect to the trailer for giving no hint of the plot whatsoever.  
[youtu.be/-RP3O7vLq3A](http://youtu.be/-RP3O7vLq3A)



## Arriving at Arrival

YouTube channel Lessons from the Screenplay has put together this 15-minute analysis of the changes made for the bigscreen adaptation of a short story for the recent sci-fi smash *Arrival*. An intriguing vid for fans of the film, especially those curious about its 'non-linear' narrative.  
[youtu.be/QTxvzkWVsQE](http://youtu.be/QTxvzkWVsQE)



TOP PICK

## All aboard the Besson mad train

French writer/director Luc Besson is back in sci-fi mode with *Valerian and the City of a Thousand Planets*. This final trailer, before the film's late July cinema release, brings to mind a sort of *Avatar/Pacific Rim/Star Wars* hybrid festooned with CGI. We'll be on the lookout for 3D screenings.  
[youtu.be/bcllQFPbPnM](http://youtu.be/bcllQFPbPnM)




## Monitor Audio's Silver service

Launched at the The High-End Show in Munich in May, Monitor Audio's mid-range Silver loudspeakers will be hitting shops this Summer. This brief teaser vid gives you a taste of how utterly gorgeous they look and highlights new tech developments. Wait for our review to find out how they sound...  
[youtu.be/P9FiYOxd7kU](http://youtu.be/P9FiYOxd7kU)



# It's an AVR, Jim...

Denon HEOS AVR → [www.denon.co.uk](http://www.denon.co.uk)



For some home cinema enthusiasts, trailing cables and bulky boxes are the enemy. Step forward the HEOS AVR, which wants to kickstart a new era of streamlined sonic thrills. As per the name, this £800 5.1-channel receiver links to Denon's wireless HEOS speakers (for the surround channels and subwoofer – left/centre/right are still wired), while the design drops the display window and front-panel clutter of typical models. 4K hookup, multiroom integration and app control are all part of the package. In shops now.

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Each May, the audio industry migrates to Munich to unveil killer new hardware. **Ed Selley** marvels at everything from a 50in subwoofer to speaker debuts from KEF, DALI, Wharfedale and more



# Munich High-End Show 2017

Monitor Audio launched its new Silver series of speakers, while KEF (below) revamped its Q range



**EVEN JUST A** few years ago, the High-End Show in Munich was probably not the destination of choice for the AV enthusiast. It was firmly directed at the two-channel market – and usually the part of that market where pricing was more in keeping with a telephone number than something you might associate with having a plug...

Yet the beauty of the M.O.C exhibition centre – now in its 13th year of hosting the expo – is that it has been able to expand into spare capacity, and the High-End Show has morphed into a key launch pad for companies at all price points. The show retains its premium ethos, of course, but there's interesting new gear at more affordable levels, too. Here's our pick of the pack.

## Monitor Audio

The main focus of the Brit brand's hall stand, complete with installed listening booth, was its new Silver series of speakers. This is the sixth generation of the range, and the main thrust has been on taking the basic features of previous lines and going over the components with a view to extracting a level of performance that Technical Director Dean Hartley felt the speakers were capable of but had not completely achieved. These revisions include new C-CAM dished cone drivers in 5.25in, 6in and 8in sizes; an updated 1in gold dome tweeter; revamped bass ports; and cabinets that have spent time at the National Physics Laboratory having lasers fired at them to determine rigidity.

What's noteworthy from an AV perspective is that Monitor Audio is keeping the faith in terms of multichannel support. There may only be one subwoofer but the two standmounts and three floorstanding models are backed up by a choice of two centre enclosures – the smaller and more easily installed Silver C150 and the hefty C350 for serious cinephiles. And, as before, the range offers a dedicated effects speaker – called Silver FX – with dipole/bipole operation. Overall, this will allow Silver buyers plenty of flexibility when it comes to system configuration, helped by a choice of six finishes.

Pricing should be the same as on the outgoing models – even slightly more affordable in some cases – when the speakers hit retailers later this Summer.

## KEF

KEF arrived at Munich with various speakers, including an update to the tremendously shiny Muon flagship. But in terms of new toys, the action is at the other end of the price band, with a new Q Series.

Now into its eighth generation, the Qs have had a thorough reworking and – as befits its importance to KEF – the Uni-Q driver that all models use has been tweaked. A Damped Tweeter Loading Tube is intended to improve the reproduction of low treble frequencies and aid the crossover of the tweeter to its surrounding midrange driver. Elsewhere, the standmount models are now rear-ported while larger speakers that use additional bass drivers have



improved surrounds with new spider assemblies. The largest models continue to employ auxiliary bass radiators, now with refined suspensions.

At launch, the Q Series will feature six speakers – the standmount Q150 and Q350, the floorstanding Q550, Q750 and Q950 and the Q650c centre.

The good news is that KEF is teasing the addition of an upwards-firing Dolby Atmos speaker to the lineup, similar to the R50 already offered for the R Series.

All models are available in black or white matte finishes (the latter looks very tasty) and the range is available to order now. Prices start at £450 for a pair of Q150s, up to £1,430 for the Q950s.

## Wharfedale

If six generations of Monitor Audio and eight generations of KEF seems impressive to you, Wharfedale managed to make them look like audio upstarts. Making its first public appearance at the show was the eleventh iteration of its Diamond range of speakers. This features eight variants; three standmounts, three floorstanding models and two centres. Pricing begins at around £150 for the smaller of the two centre enclosures through to £1,000 for the flagship 11.5 floorstander.

Key improvements concern the drivers. The midrange and midbass units all have more extensive baskets to stiffen up the whole assembly, which is combined with a larger magnet intended to boost sensitivity and improve throw and impact at the same time. The Diamond tweeter is less drastically altered, but has still seen some detail improvements.

Curved cabinets are formed with a view to avoiding resonance and standing wave buildup while also managing to look attractive at the same time. Designer Peter Comeau, on hand for a presentation, told *HCC* he believes the new line features some of the most accomplished speakers he has designed at any price, and makes use of tech and engineering principles that were impossible even in high-end speakers a few years ago.

## DALI

In a show where hi-fi still dominates, DALI took the bold decision to give its show-floor demo area over to a home cinema setup, and a very cost-effective one to boot. Newly released in the UK, the Spektor range features two standmount models, the Spektor 1 and 2, a floorstander in the form of the Spektor 6 and the Vokal centre. All feature the traditional DALI wood/fibre cone driver – similar to paper but with longer fibres that give it greater stiffness – and a soft dome tweeter.

Debuting at High-End was an effects speaker dubbed the Spektor Alteco. This is a compact two-way design and DALI has been careful not to list it as being developed for any specific object-based surround format because it can be used either firing upwards on its back or downwards when mounted on a wall. With sequences from *Mad Max: Fury Road*, and for what was a complete AV system for less than the price that some companies at the show were offering a single interconnect for, it was extremely impressive. Pricing is yet to be nailed



**Top: Wharfedale designer Peter Comeau introducing the new Diamond range**  
**Middle: Denon and Definitive Technology created a Dolby Atmos cinema room**  
**Bottom: Panasonic's EZ1002 OLED brought 4K thrills to the Munich party**

**Below: DALI's Spektor Alteco is designed to be used as either an upfiring or downfiring speaker**  
**Bottom: The HTS on-wall line from ATC comes in three sizes**



down but should be around £260 when it goes on sale in July.

## Denon/Definitive Technology/JVC

Not all the Munich cinema demonstrations were as economy minded. Denon had installed a 20-seat cinema – and by this we mean proper cinema seats securely mounted to a section of flooring, rather than a collection of chairs thrown into a square. A popcorn machine lurked in the corner, while a system comprising Denon electronics powering Definitive Technology speakers in a 7.2.4 configuration was on hand for some serious sonics, with the flagship AVR-X7200WA AV receiver paired to two PMA-2500NE stereo amplifiers for those extra channels. Bass came from the active 12in drivers within Definitive Technology's BP9080x speakers; visuals were delivered by a JVC DLA-X770R projector. Although there was no shortage of power, what really stood out was the clarity of Atmos effects and placement precision.

## Panasonic

Panasonic's re-entry into the high-end audio sphere with its Technics brand meant the company was at the expo in force with SL-1200 turntables aplenty. But it made the decision to turn up with Panasonic TV hardware too – one of its rooms was a showcase for the company's 2017 flatscreen lineup, including the flagship EZ1002 OLED set complete with Technics-tuned soundbar.

Okay, the EZ1002 was originally launched at CES in January, but it still has the power to make show-goers stop and stare, particularly as the sight of a pro-grade OLED with a good 4K feed isn't something that everybody has yet experienced. Any time I wandered past the Panasonic room, the TV had acquired an appreciative audience of viewers, including a number of hi-fi folks from exhibiting companies who probably don't often get the chance to sample the vision side of things. Could the likes of Samsung and Sony up the screen ante next year?

## ATC

Speaker marque ATC also had its home cinema hat on, choosing to show off a range of AV and installation speakers, called HTS (Home Theatre Series). The three models are all designed with a deliberately low profile to make them ideal for wall-mounting – they are no more than 14cm deep and fitted with keyhole mounts to make setup a straightforward business.

The drivers match those in existing members of the more traditionally-designed SCM family, including ATC's rather fabulous 3in dome midrange. Sealed cabinets mean they have not had to be significantly altered in mechanical terms, but crossovers are new to make the most of their on-wall placement. There's no dedicated HTS centre speaker; instead they can be ordered in a horizontal or vertical configuration depending on how you wish to place them. The speakers will be sold singularly and prices range from £475 to £1,950.



The FinkTeam WM-4 uses a 15in bass driver; each speaker weighs 135kg

IsoTek's Smart Power range introduces app control to mains conditioning  
Bottom: HCC's Ed Selley wonders if a 50in subwoofer would fit in his room...



## IsoTek

Over the last few years, app control of your AV gear has become a Big Thing, but you might presume it's limited to devices that you would have typically pointed a remote control at. Such narrow thinking belongs in the Dark Ages, according to IsoTek. As well as a record-cleaning machine that has full app control of spin, brush rate and fluid application, the accessories specialist also demo'd three mains power conditioners (Alpha, Beta and Theta) that, thanks to an Android or iOS app, can be set up with named inputs that have timer settings to come on and off, and specific restart characteristics. Suggested uses include being able to power up a projector ahead of time, or setting your system to power down automatically at, say, midnight – should you be the sort of person who falls asleep on the couch during a movie marathon.

## Ascendo

Things don't get much more 'Whoa!' than a 50in subwoofer. That's not a typo ether – I do genuinely mean a speaker with a driver that is four feet across. As well as allowing its happy owner to stand in front of it and pretend to be Marty McFly at the beginning of *Back to the Future*, Ascendo's SMSG50 promises effortless transparency and clean reproduction of frequencies below 10Hz.

Regrettably (or perhaps fortunately for exhibitors on the same floor), this mega-sub was on static

display, which did at least mean you could get close to it without risking being blown over. Instead, a home cinema using a smaller Ascendo subwoofer (all things are relative, it still had a 15in driver) and speakers powered by Storm amplification offered the most ferocious of the show's AV demos.

## FinkTeam

When it came to pure hi-fi, FinkTeam's WM-4 was solidly in the mid-table of Munich pricing, costing a mere €65,000 per pair. Yet this was perhaps my favourite-sounding speaker of the show and its background is interesting. The WM series has existed as a test bed up until now – Karl Heinz Fink, the head and namesake of the FinkTeam brand, is engaged as a consultant in the wider audio industry and the force behind a number of designs for other companies.

The WM-4 embodies ideas that are key to Fink's philosophy. The cabinet has been built to be completely inert, one of the reasons it weighs 135kg. Resonances are controlled and eliminated by a combination of density, bracing and material choice, and it's assembled in two sections so the lower box with the 15in bass driver has no influence on the more delicate units in the upper section. The result sounded phenomenal across a varied selection of music. It also puts to bed the rumour that Germans have no sense of humour – the 'WM' prefix, I'm told, stands for 'Washing Machine', a reference to the appearance of the speaker's bottom half... ■



# Munich High-End Show: It's a mad, mad, world...



At the M.O.C, show-goers are summoned by traditional Bavarian horns



Acoustic Signature's Invictus (right): as vinyl gets more popular, the turntables get more crazy



The perfect speakers for Tangerine Dream fans?



Burmester (left) unveiled its 1.8m-high BC350 floorstander

Cambridge Audio gatecrashed the show in a double-decker bus





# Fly me to the Moon

Simaudio's 888W monoblock amplifier got an airing at Munich, but not before **Mark Craven** enjoyed a sneak preview at its UK distributor. Warning: contains flowery hi-fi language...



**HOW MUCH POWER** does your speaker system need? The answer is not as much as you probably might think. But if you want power with total control, huge reserves for dynamic swells and are keen to keep processing and amplification chains away from one another in pursuit of signal purity, then a monoblock amp for each of your speakers is the way to go. And once you've gone down that route, you might as well take a look at Simaudio's new Moon 888. Just to gawp, of course.

This new flagship design from the Canadian audio specialist is a heavyweight piece of engineering, destined for installation in costly setups. Its buyers will mostly be high-end hi-fi enthusiasts, but there's no reason you couldn't park a Moon 888 on the end of your front left and right channels in your home cinema. Except that you'll need £125,000 for a pair of them.

## Coming up with a plan

The Moon 888, named after its rated power output into 8 ohm loads (1,776W into 4 ohms), is the end result of a two-year product development plan that, says Simaudio Vice President Costa Koulisakis, was in part kickstarted by the efforts of other brands.

'We've seen trends in the last few years of other manufacturers, often ones that no one has ever really heard of, launching crazy and very expensive audio products. And we've watched and we've thought: "One day we'll do ours".'

'Two years ago we made the decision to do it. We didn't know what we'd call them. All we knew is that we wanted to put together everything that we'd learned in amplifier design over the company's 37 years, and put it all into one product.'

'Why didn't we do something like this earlier on?' he asks himself. 'Pressures of the marketplace... the immediacy to have products that people want to buy right away. Not that nobody wants to buy these. Everybody wants to buy these. It's just that most people can't afford them!'

The finished product is a bit of a beast. Measuring 559mm across and 686mm deep, it won't rack nicely next to your Sky Q box. And I'm told it weighs 136kg, which, I work out afterwards, is nearly twice as much as me.

The styling is reminiscent of the brand's other Moon hardware, naturally so as it's an extension of Simaudio's product line, as opposed to an entirely new clean-sheet design. 'If we were to set out and

**Simaudio's Costa Koulisakis: 'You don't have to step on the gas to feel the power'**





design something entirely new with no relation to anything we've done before, we'd be putting the onus and responsibility on the customer,' explains Koulisakis. 'If we came up with something that over time turned out to be not as reliable or high-performance, it's the customer that pays the price, and they've invested heavily.'

So the amp takes Simaudio's previous top model, its 880M (£32,500-per-pair), as its starting point. Engineers, reports Koulisakis, were then told to 'have a ball', and not to bother asking about budgetary considerations.

You might be asking exactly what can make a single-channel power amplifier (Class A/B – 'they run in full Class A mode for most of your everyday listening levels') so expensive. I'm not given an exacting list of component prices and man-hour costs, but it's clear that a good chunk of the price comes from the heatsinks alone.

Koulisakis, on haunches and with the 888's lid prized off, waxes lyrical about the amp's thermal managing tech. 'This massive heatsink is one giant piece of cast aluminium. It's not an extrusion that's cut and bolted together.' Such a design brings sonic benefits, he says. Having a single piece allows maximum heat transmission from one end to another, for instance – 'if one side or one section gets warmer it can pass off that heat rapidly and efficiently' – as opposed to a heatsink comprised of different parts. And by using an aluminium mould, Simaudio's engineers have had the freedom to create a unique form, boasting (internally) various channels, shapes and holes to further dissipation and control vibrations. Furthermore, the sink is rigid, with minimal flexing.

'The only downside,' says the Simaudio man, 'is cost. Particularly in the low volumes that these will be manufactured in.'

Twin transformers, one handling in phase and the other the out-of-phase signal, are encapsulated in a special pot, chrome-plated and filled with epoxy, to reduce vibration. The output boards are themselves inset into the 888's heatsinks, again to minimise vibrations. The dual binding posts (for biwired setups) are rhodium copper-plated designs from Japanese specialist Furutech.

Attention to detail extends right down to the Moon 888's chunky boots. All of the company's other amps have threaded cone feet that can be adjusted to ensure the product sits level on an AV stand, but the weight of this flagship makes lifting it up to fiddle with feet not an option. Instead, it boasts a quartet of 'self-levelling' feet, with a spring-loaded rubber insert that threads inside, depending on the amount of weight on top of it. Simaudio claims this means it will sit perfectly level on any surface; it also acts as a natural dampening material. That's right: this amp has its own internal suspension.

'It's a very minor benefit,' admits Koulisakis. 'But it has an incident. These small differences on a lesser amp probably wouldn't make much of a difference. But in a product of this level, where you're talking nanoscopic details, you can hear what these things do. If I were to remove them and put on regular feet you would hear it.'



**Top: The 888s in situ, powering YG Acoustics floorstanding speakers**  
**Above: Twin transformers sit near the front of the chassis, housed in chrome-plated pots**

Our demo was set up by Simaudio's partner in hi-fi crime, Renaissance Audio, a dealer/distributor based in Edinburgh. A pair of the Moon 888s were run into YG Acoustics floorstanding speakers. Again, these are pricey (around £100,000 a pair) but, says Renaissance chief John Carroll, exactly the kind of system level they expect Moon 888

buyers to have. Further back in the chain were Simaudio's own processing and DAC separates, with content coming from... an iPad. I had perhaps been expecting a £20,000 CD player.

The amps strut their stuff, and the performance is – as hoped – startling. But while it's a sonic experience that warrants hi-fi-certified phrasing about imaging and tonality, what is most apparent is the impeccable bass weight that these amps can muster. The low-frequency drivers of the tower speakers are held in a vice-like grip.

The moody synth pop of London Grammar's *Hey Now* sounds thrillingly life-like and evocative, a mix of reverby vocals, electro noodlings and lows that go deep, and then deeper still. At the opposite end of the scale, Metallica's *Enter Sandman* is effortlessly punchy and tight, with monster riffs surging forward atop insistent kickdrum thuds and snare blasts.

And, yes, the amps can comfortably play loud, without any sign that anything isn't ticking over as it should. But, according to Koulisakis, that's not the entire point of such a premium design. 'It's not just about the high volumes. It's about playing at moderate listening levels, content with a lot of detail in it. It's the resolution of the amplifier.'

'It's akin to driving a 2,000 horse power car on the street,' he adds. 'You don't have to step on the gas to feel the power. You just have to tap on the gas to feel that power's there...'

I depart, having exhausted Renaissance Audio's streaming track library, idly totting up the cost of a seven-channel speaker system with Moon 888s all round. This is fantasy, I know. The good news is that Moon also sells a seven-channel power amplifier, the MC-8. And it doesn't cost as much ■

**The Moon 888's heatsinks are made from a single, sculpted piece of cast aluminium**

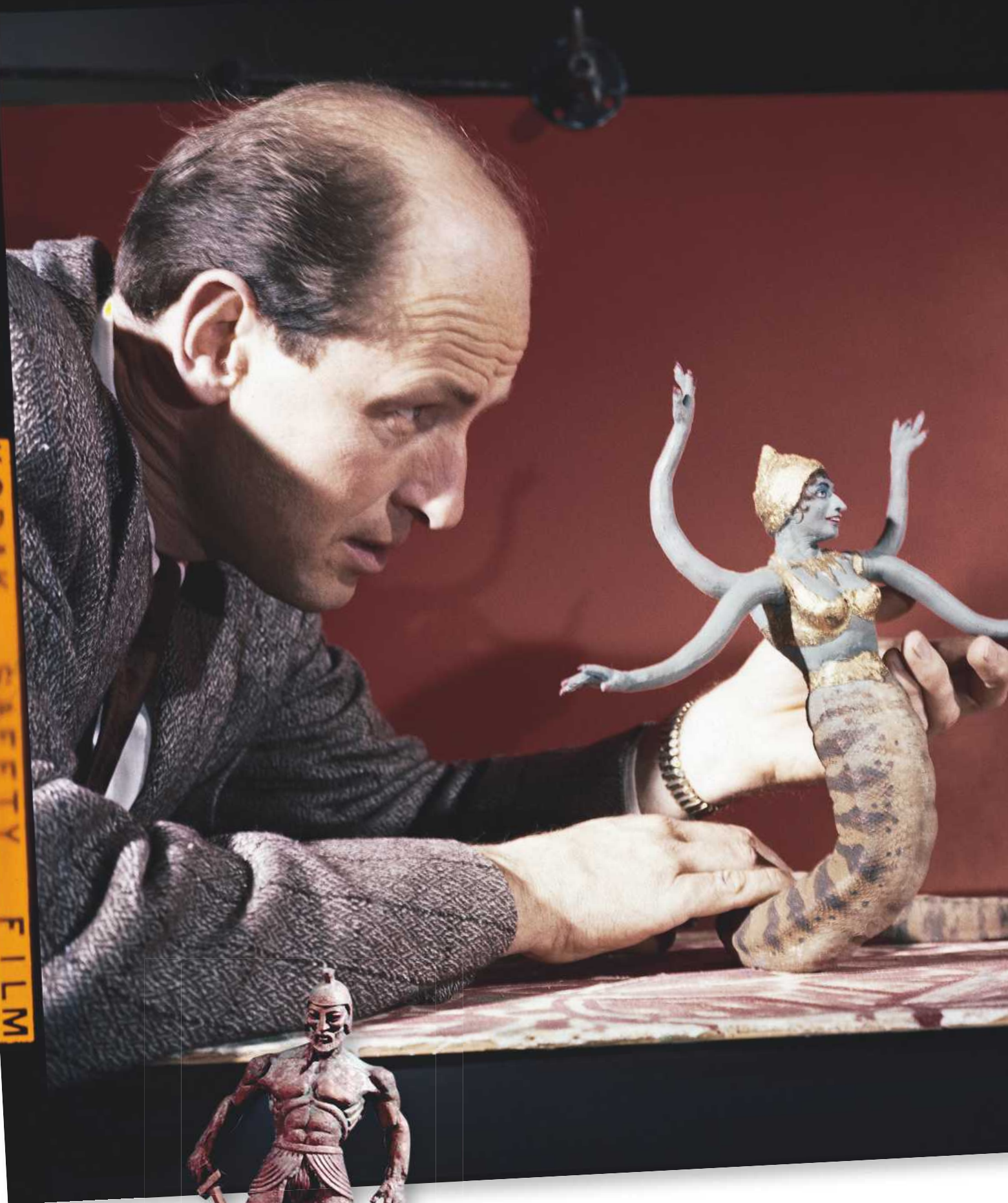




F I L M

KODAK SAFETY FILM

MAIN PHOTO: © THE RAY AND DIANA HARRYHAUSEN FOUNDATION





# Master of illusions

Ray Harryhausen thrilled movie fans for decades with his innovative technical effects. As his *Sinbad* trilogy debuts on UK Blu-ray, **Richard Holliss** celebrates his unique talent

*The Golden Voyage of Sinbad* (1973)  
– available on UK Blu-ray soon



**IT ALL BEGAN** in 1933 in the darkened auditorium of the famous Grauman's Chinese Theatre on Hollywood Boulevard. A 13-year-old dinosaur enthusiast called Ray Harryhausen sat spellbound as the magic of motion pictures transported him to the steaming jungles of a lost island off the coast of Sumatra. Here, in a land of hostile natives and monstrous prehistoric creatures, lived the Eighth Wonder of the World – a giant gorilla called King Kong.

Of course, the awe-struck movie-goer didn't realise at the time just how important the special effects in *King Kong* would be in shaping his future. But in the years to follow, the name of 'Ray Harryhausen' would become synonymous with the art of stop-motion animation, while his impressive body of work would become a major influence on generations of filmmakers.

This month, indie Blu-ray label Indicator is giving Harryhausen fans reason to cheer, with

an extras-laden UK hi-def debut for his *Sinbad* trilogy (*The 7th Voyage of Sinbad*, *The Golden Voyage of Sinbad*, *Sinbad and the Eye of the Tiger*). These three flicks are just a snapshot of a career lasting more than 30 years...

## Putting a career in motion

Born in Los Angeles in 1920 (he would eventually relocate to the UK), Harryhausen grew up with a passion for film, literature, art and music. But it was *King Kong* and its innovative model animation – in which miniature articulated models were manipulated one frame at a time to simulate movement – that fired his imagination. He began building his own models and shooting a series of experimental films, which led to a chance meeting with Willis O'Brien. A pioneer in stop-motion special effects, O'Brien was the genius behind both *King Kong* and the 1925 silent version of Sir Arthur Conan Doyle's *The Lost World*.

Harryhausen's stop-motion animation dovetailed with an audience passion for elaborate fantasy flicks



Their paths would cross again later after the end of the second World War. Between times, in the late 1930s, Harryhausen spent two years working for producer George Pal (*Destination Moon*, *When Worlds Collide*, *The War of the Worlds*) at his famous Puppetoon film unit, before joining director Frank Capra (*It's A Wonderful Life*) as an assistant cameraman and special effects technician on the classic *Why We Fight* US propaganda series. In 1946, he released the first in a new series of stop-motion films based on famous nursery rhymes, called *The Mother Goose Stories*.

Harryhausen's Hollywood break came when he received an invitation from O'Brien to work on his film *Mighty Joe Young* (1949), about a gorilla that (like Kong) is captured and brought back to civilisation. Harryhausen grabbed the chance while also working on numerous script ideas of his own, including a version of H. G. Wells' classic novel *The War of the Worlds*. But most studios considered stop-motion animation far too expensive, let alone understood the principles involved.

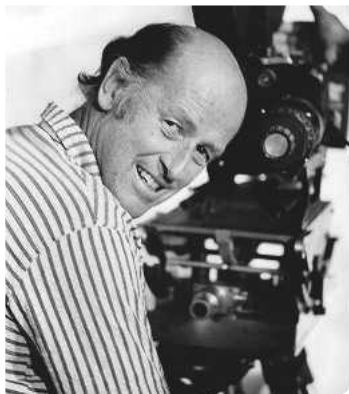
The explosion of the science-fiction genre in the 1950s changed all that. Interest in space exploration, flying saucers and the atomic bomb ushered in a new era of B-movie cinema, which saw teenage audiences lining up at theatres to view movies about giant creepy-crawlies, alien invasions, prehistoric monsters and atomic mutations.

This was subject matter that dovetailed perfectly with Harryhausen's unique talents, and when producer Jack Dietz greenlit a new low-budget monster movie, the animator managed to persuade him to use stop-motion for its visual effects. The movie, 1952's *The Beast From 20,000 Fathoms*, was



**Black-and-white '50s B-Movies:**  
*The Beast from 20,000 Fathoms* (top)  
and *Earth vs The Flying Saucers*

**Harryhausen developed Dynamation,**  
a rear-projection/matte stop-motion  
capture technique



based on a short story called *The Foghorn* by life-long friend Ray Bradbury (*Something Wicked This Way Comes*, *Fahrenheit 451*), and featured a dinosaur reawakened from a million-year slumber by an atomic test, and subsequently attacking New York City. Largely due to its memorable FX work, Warner Brothers' release grossed \$5m at the box office.

## Beasts by Ray

Harryhausen and his animation nous were now hot properties, and the success of *...20,000 Fathoms* came to the attention of Hollywood producer Charles H. Schnee. Harryhausen was approached to discuss a movie about a giant octopus terrorising San Francisco, which became 1955's *It Came From Beneath the Sea*. Released by Columbia Pictures, it heralded the start of a business partnership that would span a total of 12 films.

Harryhausen and Schnee next worked on two more sci-fi films, *Earth vs. the Flying Saucers* (1956) and *20 Million Miles to Earth* (1957). Although these were low-cost, black-and-white productions, they provided the animator with the opportunity to hone his skills. Each of his exquisitely made models, whether it was a six-tentacled 'octopus', a whirling flying saucer or a monster from Venus, were animated frame-by-frame in an ingenious system employing a translucent back-projection screen that allowed interaction with live-action elements.

The trick was to split live-action footage into foreground and background, enabling models to be placed within a scene, a process described by Harryhausen as 'simple but very effective'. Live-action material, including actors reacting to

## Making monsters come alive – before CGI

Three of Ray Harryhausen's most memorable stop-motion moments...



### Jason and the Argonauts

'Destroy them! Kill them all!' In the climax to this 1963 fantasy epic, the children of the Hydra's teeth – an army of sword/spear-wielding skeletons – emerge from the earth to stop Jason and his crew escaping with the Golden Fleece, in a sequence that took Harryhausen over four months to shoot. 'I was producing just 13 or 14 frames a day, or – to put it another way – less than one second of screen time,' he later recalled. An outstanding example of stop-motion animation, the onscreen interaction between the 10in-high skeleton models and the live-action cast (including Todd Armstrong as Jason) is faultless.



### One Million Years B.C.

There are numerous encounters between prehistoric animals and cave people in Hammer's 1966 dino flick – including Raquel Welch being carried off by a pteranodon. But the highlight is the battle between Welch's co-star John Richardson and a young allosaurus. Striding into camp in search of food, the predator (in a scene reminiscent of Fay Wray at the mercy of the tyrannosaurus in *King Kong*) corners a helpless child in the branches of a tree. Using his bespoke Dynamation process, Ray brings the scene vividly to life, resulting in a ferocious physical confrontation that is breathtaking to watch.



### Clash of the Titans

In this story of Perseus and the Gorgon, the hero has terrifying encounters with the two-headed dog Dioskilos, the horned Calibos, three giant scorpions and the monstrous Kraken. The scene that everyone remembers, though, is the battle with the snake-haired Medusa. In her temple illuminated by flickering torchlight, she slithers after Perseus, her serpentine body casting ominous shadows on the surrounding walls and columns. To achieve the desired effect, Harryhausen constructed a special wheel with red and orange cels to replicate the identical flame effects used in the live action. Clever.





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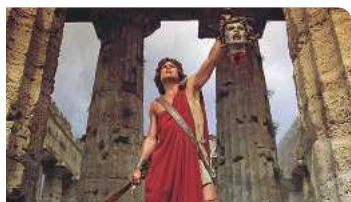
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#SpiderManHomecoming

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Greek mythology (*Clash of the Titans*, top), Middle Eastern fables (*The 7th Voyage of Sinbad*, middle) and Jules Verne sci-fi (*Mysterious Island*, bottom) are all part of Harryhausen's filmography

beasties that weren't yet there, was projected onto a rear screen; animated models were then shot in front of it. However, a glass sheet placed in front of both was used at this stage to matte out certain foreground elements. Once the animation was complete, Harryhausen would then shoot again, having reinstated the matted out section, resulting in a single image with a sense of depth and scope for interaction.

For his next venture, *The 7th Voyage of Sinbad* (1958), this animation technique was promoted as 'Dynamation', a name dreamed up by Schneer to describe his business partner's unique brand of modelwork. Audiences duly gasped at Sinbad's heroic encounters with a one-eyed Cyclops, a fire-breathing dragon, a two-headed Roc and a sword-wielding skeleton. In his Jules Verne-inspired 1961 movie *Mysterious Island*, they were similarly treated to a giant crab and a prehistoric Phororhacos, a gigantic bee and a multi-tentacled cephalopod. With other scenes set against the backdrop of Captain Nemo's fantastic submarine Nautilus, the destruction of the lost city of Atlantis, and an exploding volcano, *Mysterious Island* won great acclaim at the box office, particularly in the UK.

1963 saw the release of what many consider to be Harryhausen's finest film – *Jason and the Argonauts*. Taking a leaf out of Greek mythology, it recounts the tale of Jason and the Golden Fleece. In true Harryhausen style, it includes a myriad of impressive stop-motion creatures – a giant man of bronze called Talos, grotesque flying harpies, a seven-headed Hydra and an army of skeletal warriors.

He then reverted to sci-fi for 1964's *First Men in the Moon* (1964), from the novel by H. G. Wells. With a modern prologue by *Quatermass* author Nigel Kneale, the film kept to Wells' vision by setting the story in the Victorian era, which made the journey to the lunar surface even more outlandish and inventive. It was, however, to be Harryhausen's only 2.35:1-framed movie, as the Panavision system severely hampered the Dynamation process.

### Dinos! Titans! Medusa!

Over the next 17 years, Harryhausen's work included a team up with Hammer Films' on its Raquel Welch

prehistoric epic *One Million Years B.C.* (1966), Warner Brothers' allosaurus-filled *The Valley of Gwangi* (1969), and the two further Sinbad adventures for Columbia Pictures. His final movie in a long and illustrious career was *Clash of the Titans* (1981), a large-scale production for MGM boasting a roster of A-list names including Laurence Olivier, Ursula Andress and Maggie Smith, and one of his most accomplished stop-motion sequences, featuring the dreaded snake-haired Gorgon, Medusa (see p28).

...*Titans* was the master animator's swan song, and was released at a time when VFX work in Hollywood was transitioning to CGI – Jeff Bridges would find himself riding lightcycles in a computer animated world in *Tron* only a year later. As processing power increased and software became more sophisticated, stop-motion should have been consigned to history.

And yet it wasn't. Frequent TV screenings of Harryhausen and his contemporaries' older movies helped to create a new generation of fans. His work was praised by Hollywood luminaries such as Steven Spielberg, George Lucas and James Cameron. More recently, film directors including Tim Burton, Henry Selick and Nick Park have kept stop-motion techniques alive, with blockbuster films such as *The Nightmare Before Christmas*, *Coraline*, and *Wallace and Gromit* respectively. 2016's *Kubo and the Strings*, also a stop-motion production, picked up an Academy Award nomination for Best Visual Effects.

In his retirement, Harryhausen's contribution to cinema was recognised by the Academy of Motion Picture Arts and Sciences with The Gordon E. Sawyer Award, presented at a ceremony by Ray Bradbury and celebrity fan Tom Hanks, and another accolade followed when his name was immortalised on the Hollywood Walk of Fame. When he passed away, aged 92, in May 2013, he left behind him an incredible legacy, and a portfolio of some of the greatest fantasy movies ever made. And contributed to our fear of reanimated skeletons... ■

Richard Holliss is the author of the book *Harryhausen Poster Art*. Written in conjunction with The Ray and Diana Harryhausen Foundation, it will be published in 2018 by Titan Books.

## Win! The Sinbad Trilogy Blu-ray boxset!

Enjoy a trio of restored Harryhausen classics in hi-def for the very first time...

Blu-ray label Indicator has a treat in store for Ray Harryhausen fans this Summer. Limited to 6,000 copies, *The Sinbad Trilogy* dual-format boxset brings *The 7th Voyage of Sinbad*, *The Golden Voyage of Sinbad* and *Sinbad and the Eye of the Tiger* to Blu-ray in the UK for the first time – all restored from the original camera negatives.

Bonus goodies include a commentary by Harryhausen on *The 7th Voyage of Sinbad*; rare audio recordings of Harryhausen in conversation with producer Charles H. Schneer; new interviews with Tom Baker, Caroline Munro and Jane Seymour; archival documentaries; isolated scores; Super 8 cut-down versions; an exclusive 80-page book; and loads more.



To celebrate we've got one boxset to give away. To be in with a chance of winning *The Sinbad Trilogy*, simply answer the following correctly...

### Question:

Ray Harryhausen worked with special effects and stop-motion pioneer Willis O'Brien on which classic giant ape movie?

### Answer:

A) *King Kong* B) *Mighty Joe Young* C) *Konga*

Email your answer with 'Sinbad' as the subject heading – and don't forget to include your postal address! See p84 for full T&Cs.



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# TIME FLIES WHEN YOU'RE HAVING FUN...

Binaural audio is being trialled by the BBC on *Doctor Who* as part of an experiment that could see the entire audio landscape changed. The only catch? You have to wear headphones.

**Jamie Carter** reports



**Knock Knock** guest star David Suchet: not the ideal housemate...



**IF YOU HAVE** a home cinema then you know all about surround sound, but what about spatial audio? In May, the BBC posted a special edition of its long-running sci-fi series *Doctor Who* on the BBC iPlayer strapped with what it called a 'binaural' soundtrack. This fourth episode of the latest series, *Knock Knock*, can be streamed until the end of July, but to hear it in binaural – also known as 3D sound – you have to don headphones.

Although it will be a new term to many, there's nothing intrinsically complex about binaural sound, it simply means 'listening with two ears'. 'We listen to binaural audio all day, it's a very natural experience,' says Cathy Robinson, Audio Supervisor at BBC Wales, who helped mix the *Doctor Who* soundtrack. She

likens a binaural experience as feeling like you're in the room, rather than just looking at the room. 'When you're watching TV it's like you're at the theatre and the sound is being projected at you, but with binaural the images are the same, but it feels like you're stepping onto the stage – you're in that space.'

*Knock Knock* is impressive for its surround sound effects, but mostly for the distances it creates; actors talking close to the camera shot are incredibly clear and feel near, whereas actors talking across a room have an echo. It's really clever.

'When I go back to listening to ordinary stereo it feels too close, and I don't want that anymore, I want the big sound, I want that space,' says Robinson. 'It's like when we went to high-definition TV – you don't





know you want it until you go back to watching in standard-def.'

So why now? Because more and more people are watching video on their smartphones and tablets and, consequently, listening through headphones. And people are also more likely to be investing in good-quality cans.

'It's not trying to replace 5.1 or a TV mix, it's just for those people who want to wear headphones,' states Robinson. Effectively, what the BBC has done is to create a multichannel, object-based mix akin to something like Dolby Atmos, but to deliver it through stereo headphones of the kind that most people already own (the BBC iPlayer file has a standard 24-bit/48kHz soundtrack). There's another crucial difference, too; while Atmos requires compatible equipment to decode an object-based audio soundtrack, the BBC's binaural mix is decoded by that most affordable of gadgets; human ears.

### History of innovation

That an episode of *Doctor Who* is the choice for the BBC's binaural experiments is not surprising: it's always been associated with pioneering sound engineering. The 54-year-old series, which has run for over 830 episodes, had an iconic electronic theme provided by the BBC's famous sound effects studio, the Radiophonic Workshop. Set up in 1958 at the BBC's Maida Vale Studios in London and shuttered 40 years later, its staff also worked on the music for *Blake's 7*, *The Hitchhiker's Guide to the Galaxy* and *Tomorrow's World*, plus standard TV fare like David Attenborough's *Life on Earth* and *Blue Peter*.

Consequently, since *Doctor Who*'s re-boot in 2005 after being dormant since 1989, the series has been operating without the help of the Radiophonic Workshop. Now, however, it has the skills of audio pioneers once again – the BBC Wales sound team in Cardiff.

*Doctor Who* is its most famous experiment so far, but Robinson's team has used its pioneering binaural software tools on productions for BBC radio, including a drama of Japanese fairy tale *The Ring* (you can find it on YouTube) and another for Russell T Davies' adaptation of *A Midsummer Night's Dream*, as well as various musical productions for BBC Radio 3. 'When I'm crafting it, less is more – if you want the effect to come through there needs to be less going on, and much higher-frequency pinpoint directional sounds come through very well,' says Robinson. 'Having lots of sound effects at the same time masks the effect.'

The script is also important; during the binaural episode of *Doctor Who* it's obvious that when cuts between shots are very fast, the audio is at its least convincing. Longer, lingering shots are easily the most effective. 'It's my hope that the creative people will write scripts knowing what the technology is capable of,' admits Robinson.

Away from TV, the BBC's software tools could be used to give virtual reality headsets the immersive audio they've so far lacked. This, however, requires a much more complex form called 'dynamic binaural'. 'Normal binaural is static, but dynamic binaural is when you start to move sounds when you move your head through 360 degrees, which requires a sensor in the headset to make those sounds move,' says Robinson, who last year created the binaural audio tracks for some 360-degree downloads for the *Planet Earth II* series. Could the tech be VR's missing link?

### Scalable soundmixes

Back at BBC R&D in London, there are even bigger plans for binaural sound. Instead of replicating surround sound, the Beeb's engineers want to capitalise on binaural encoding tools to help develop an industry standard that would allow a single mix of spatial audio that would adapt to the audio equipment the listener chooses, automatically giving them the correct format. 'For spatial audio it would adapt to whatever setup people are using, so if you have a 7.1 system it would give you the spatial mix of that, and if you have headphones, then you plug them in and it gives you binaural,' says Chris Pike, a senior scientist at BBC Design & Engineering. 'We're not there yet, but we're working on automated algorithms with richer metadata about your 3D scene, so you ultimately get the right format.'

There are also attempts being made to customise spatial sound. We've all looked for the sweet-spot in a home cinema – that ideal listening position where the output from multiple speakers blends into the optimum image – but what makes that place in the room perfect for one person doesn't necessarily make it so for another. That, says the Beeb boffins, is down to the shape of our heads, faces, and ear canals. 'It's important not just to capture the distance between your ears, but how the sound bounces off the face shape and the ear canals to create the illusion,' says Robinson. 'So in future we'll take a head measurement and put it into the computer as our own personal thumbprint for listening to sound – and we'll get a much more accurate representation.' Such customised calibration is known as the head-related transfer function (HRTF) and it's already happening; the commercially available, Kickstarter-funded, OSSIC X headphones are calibrated to your head and ear features.

You could be forgiven for thinking that binaural audio is just another development that promises a lot but will fail to make an impact. The beauty is that the BBC has made it available for you to check out with minimal fuss. As for whether or not it has a big future, it seems fitting that it has fallen to a Time Lord to find out... ■



OSSIC X headphones calibrate to a user's ear/head shape for personalised sound



# Starstruck by Dolby Atmos

Plush furnishings, a 3m-wide projector screen, star ceiling and 5.1.4 speaker setup make this a cinema room we'd love to kick back in



## KIT CHECKLIST

**SCREEN INTERNATIONAL:** 3m (wide) 16:9 ratio Cinesound Screen with velvet frame  
**EPSON:** EH-TW9200W Full HD projector  
**DEFINITIVE TECHNOLOGY:** 3 x DT8LCR in-wall speakers; 4 x DT6.5R in-ceiling speakers; 1 x IW Sub 10/10 in-wall subwoofer; 2 x UIW RSS II in-wall surround speakers; SubAmp 600 (600W rack amplifier)

**INTEGRA:** DTR-60.6 AV receiver; DBS-30.3 Blu-ray player  
**KALEIDESCAPE:** KVAULT-DV700; Strato player  
**CONTROL4:** SR260 remote control  
**APPLE:** Apple TV  
**SKY:** Sky Q  
**SEATING:** Owner's own





**THIS CAVERNOUS HOME** cinema was designed and installed as part of a whole-house project undertaken by UK company Cyberhomes. The rest of the property has been kitted out with flatscreen displays, distributed video, a games room and no fewer than 15 audio zones – yet it's this movie den that gets our attention.

Feeling like a crossover between traditional home cinema and a regular living space, it's dominated by the 3m-wide projector screen that takes up almost an entire wall. This is currently used in conjunction with an Epson Full HD projector and sources ranging from Kaleidescape to Sky Q. Ceiling-mounting means upgrading the projector to 4K in the future is a simple task.

One upgrade that occurred midway through the project concerns audio – the proposed surround sound speaker system was boosted to a Dolby Atmos installation, using four in-ceiling speakers. These join with in-wall and behind-the-screen LCR models, plus an in-wall sub (all from Definitive Technology) to create a discreet 5.1.4 setup.

Integration with Control4, the system used through the rest of the house, ensures easy operation of the cinema hardware and lighting. Automated control also extends to the black-out blind ■

### A. Look to the stars

The cinema's ceiling features an LED starfield for a touch of luxury ambience. Running around it is a ceiling soffit that provides placement for the room's Dolby Atmos overhead speakers

### B. A colossal canvas

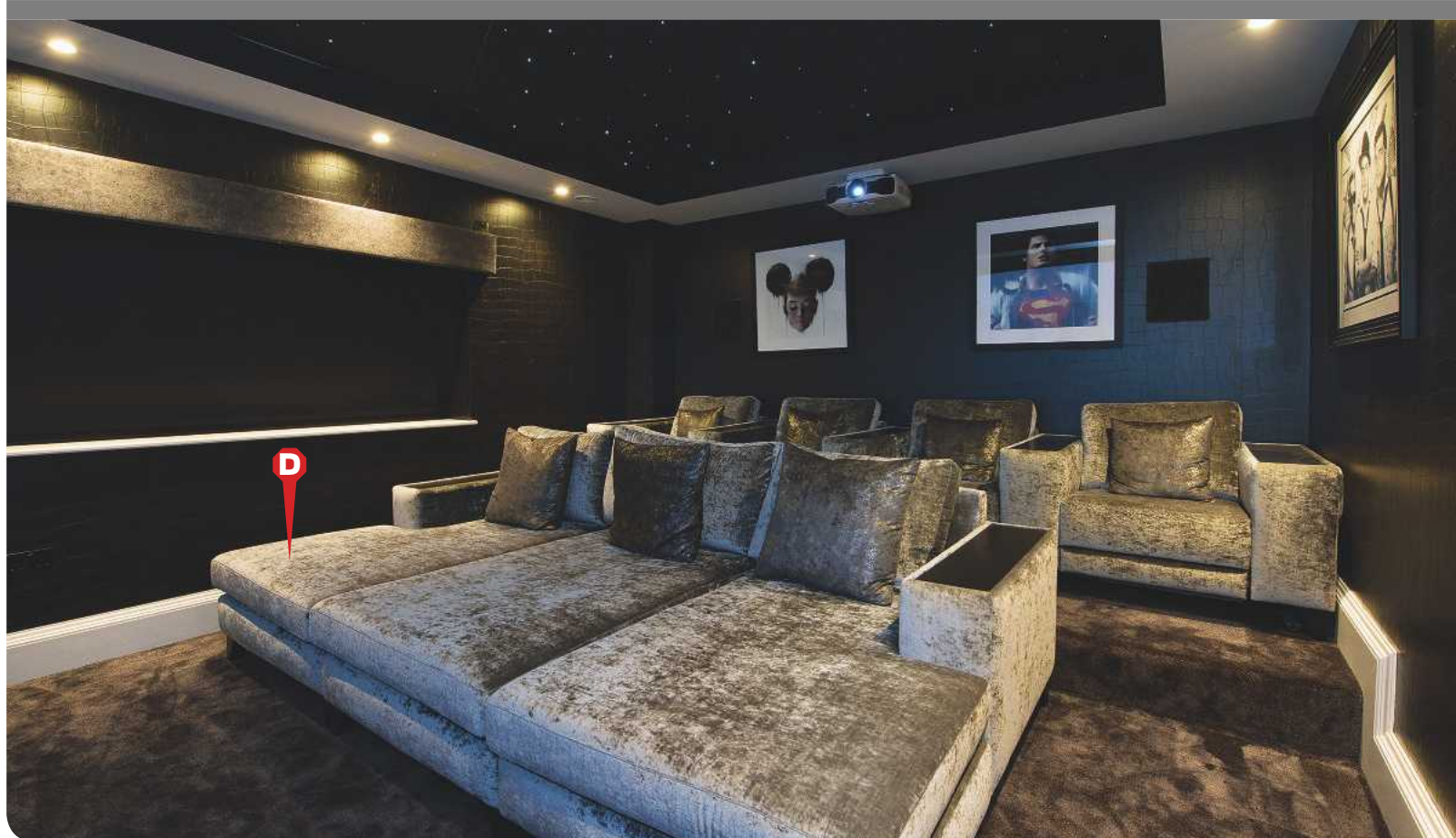
For the projector screen, a 3m model from Screen International was chosen. The 16:9 ratio makes it a good fit for both TV and movie material, while the velvet surround fits well with the room's soft furnishings

### C. Darkness on demand

One side of the cinema features an exterior window – a blackout blind is fitted that automatically drops into place when the system hardware is put into movie mode >







#### **D. Magnificent Seven**

The cinema will comfortably house seven movie viewers (more if those on the front row are prepared to snuggle up...), using seating supplied by the owner

#### **E. Projection selection**

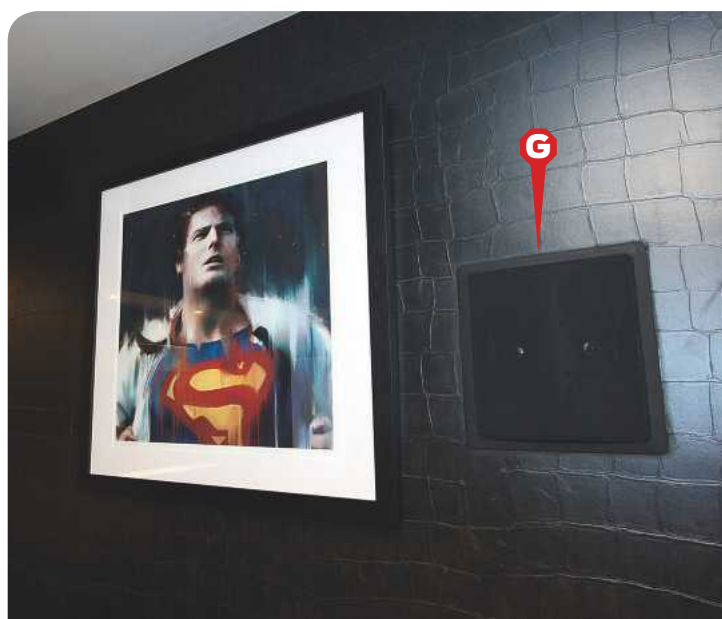
Helping to stop the system budget spiralling sky high is this Epson EH-TW9200W projector – a relatively affordable model, compared to 4K rivals, that still offers a crowd-pleasing performance

#### **F. Channel surfer's paradise**

The kit rack provides video for screens around the house, including the cinema – both Sky Q and Sky+HD hardware (for Freesat) is in use

#### **G. Another audio brick in the wall**

The Definitive Technology speakers used include two UIW RSS II bipolar in-wall models for the surround channels. Each incorporates two tweeters, two midbass drivers and two passive radiators







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Photo: Musical Images installation

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# REVIEWS

→ **HARDWARE** LG 65in E7 OLED Dolby Vision TV and SJ9 Dolby Atmos soundbar  
**SAMSUNG** Flagship curved Ultra HD TV **GOLDENEAR** 2 x 12in subwoofer **POLK** Compact  
 soundbar/sub system **SONY** Debut 4K Blu-ray deck **OPTOMA** Short-throw gaming projector with  
 Darbee processing **YAMAHA** MusicCast adapter and slim-line AV receiver **AND MORE!**

## 4K battleship!

Oppo's UDP-205 promises to be the heavyweight champion of Ultra HD Blu-ray – but this premium player also wants to blow your ears off. See p44...

### HCC RATINGS KEY...

Outstanding	★★★★★
Above average	★★★★☆
Acceptable	★★★☆☆
Disappointing	★★★☆☆
Dire	★★★☆☆

All prices quoted are approximate and may have changed





**A LAST  
HURRAH?**

Does the *Resident  
Evil* series go out  
with a bang on  
Blu-ray? p96



LG proves to **John Archer** that OLED technology has what it takes to make it in an increasingly HDR world

# OLED strikes back – brighter

The explosion of HDR sources has caused more than a few headaches for OLED TVs. Once seen as the next step in image quality, the technology's biggest weakness – a lack of brightness versus LCD displays – has been cruelly exposed by HDR's expanded light range. LCD-loving Samsung, in particular, has been sticking the boot into OLED's relatively limited light output at every opportunity.

A fight back started last year, though, as LG crafted almost a third more luminance from its OLED panels than it had managed previously. And now it's moved even further forward, reaching 800 nits (measured via a 10 per cent white window pattern) versus around 650 nits in 2016.

Adding additional brightness to improved video processing has already delivered appealing results from the ultra-expensive, so-thin-you-can-bend-it OLED65W7 (HCC #272). And, since LG claims to be using the same core picture engine in all of its OLED TVs this year, I'm hoping for the same level of image prowess from the much more affordable OLED65E7 auditioned here. The W7 sells for £8,000, and comes with a soundbar/connections box that makes use in a traditional home cinema setup a faff, and can only be wall-mounted. This model seems a much better proposition for serious AV enthusiasts.

## Thin is still in

Obviously, the OLED65E7 isn't as amazing to gawp at as the W7. It looks more like a regular TV than something culled from a sci-fi flick. It's still remarkably thin, however – just 3–4mm over the majority of its rear – and the OLED film is mounted directly onto a sheet of glass to exaggerate that incredible slimness.

Only the bottom quarter or so of the TV's rear possesses any bulk, necessary to integrate processors, screen drivers and speakers – the latter appearing from the front as a silver soundbar attached to the panel's bottom edge. These 'bulgy bits' don't alter the fact that the OLED65E7 looks worthy of its £5,000 price tag, even before you've switched it on.

The integrated soundbar, like the external system sold with the W7 TV, claims Dolby Atmos support. However, it suffers from the same technical limitation: Atmos is only

decoded from Dolby Digital+ bitstreams, not the TrueHD containers used by Ultra HD Blu-ray discs (this situation has thankfully been resolved with LG's SJ9 soundbar – see p50).

I therefore approached the 'Atmos' label with a dose of scepticism, especially given the 'bar's relatively compact size. There's no real surround-channel information and nothing ever seems to come from above your head (two key elements of an Atmos experience), but the OLED65E7 does at least deliver a high and wide wall of sound. Voices sound clear and clean too, the mid-range has body, and – most surprising of all – the speakers manage to convey bass-rich moments, such as the underwater rumbles around *Deepwater Horizon's* ill-fated drilling rig, with decent authority and depth.

So while LG's Atmos ambitions are hamstrung from the get-go but that TrueHD limitation, the TV generally sounds rather good.

## What's your HDR flavour?

The OLED65E7 is more flexible where its HDR support is concerned. The set's four HDMI and streaming apps are all capable of handling more variants of the format than any other brand can currently claim: Dolby Vision (DV), the industry standard HDR 10 platform, the new broadcast-friendly Hybrid Log Gamma system, and, uniquely, Technicolor HDR.

While this sounds great on paper, it's worth reflecting that we've yet to see any content that uses Technicolor's take. Also, the OLED65E7 doesn't support the dynamic HDR 10+ system that has been launched by Samsung and will feature on Amazon content.

Samsung's HDR 10+ TVs, for the record, do not provide support for either Dolby Vision or the Technicolor HDR system.

## AV INFO

**PRODUCT:**  
65in 4K OLED with Dolby Vision and HDR 10 support

**POSITION:**  
Below the W7 'wallpaper' and G7 pedestal stand models

**PEERS:**  
Sony KD65A1; Samsung QE65Q9F

**1. Want smaller?**  
There's also a 55in E7 model available

**2. The Netflix hotkey is joined by one for rival Amazon**





3

And while we're still waiting for the first Dolby Vision Ultra HD Blu-rays, comparing Dolby Vision streams from Netflix on the LG OLED with 'normal' HDR 10 images clearly shows the advantages DV's layer of dynamic metadata can deliver.

There's more detail, richness and balance in the DV pictures, which is more than enough compensation for them not looking quite as bright as HDR 10.

These DV streams, along with countless more apps besides, are delivered through LG's WebOS 3.5 operating system. This combines slick, logical, and economical onscreen menus with plenty of easy customisation to deliver what remains, for me, the single easiest-to-use smart TV system in town. I know that some find its cutesy approach a little grating, though.

### A step down in price, not quality

I mentioned earlier that, according to LG, the OLED65E7 should produce pictures as outstanding as those obtained from the flagship W7. Happily this appears to be true.

The internal shots in *Deepwater Horizon* on Ultra HD Blu-ray after the lights have blown out look incredible, for a start, thanks to OLED's imperious black levels. Even when there's a torchlight or bright flame punctuating the darkness, the OLED65E7 keeps blacks looking black. What's more, thanks to OLED's self-emissive nature where each pixel makes its own light, there's no hint of the backlight haloing, striping, clouding or blooming issues that affect high-contrast shots on all LCD TVs to some extent.

Just as importantly, OLED's pixel-level light precision means bright peaks in the movie's night-time images don't

4





have to compromise their intensity to retain good black levels in the way they do with LCD screens.

Thanks to this ability to produce almost perfect black colours just a pixel away from bright whites and vivid hues, high-contrast images on the OLED65E7 appear gorgeously natural, cinematic and immersive. You're able to focus on the *Deepwater Horizon* UHD BD's excellent image quality rather than the screen technology that's reproducing that quality.

It's important to stress that being able to place full black pixels right beside peak white one creates a sense of dynamism and luminosity that often makes the screen look quite a bit brighter than you might expect from an 800-nit measured light output.

The dark sequences in the post-blowout living quarters in *Deepwater Horizon* also reveal that LG has hugely improved its management of just-above-black levels. Going from what's essentially a 'pixel off' state for deep black colours to back on for a slightly lighter-than-black state is technically very difficult to achieve with precision, and last year led to some quite pronounced light shifting and sudden infusions of grey during dark sequences. This year the above-black light handling is much more subtle and effective. LG itself has been prepared to showcase the improvement by demonstrating the E7 next to last year's E6 model.

And this all has a knock-on effect to other picture areas. Sequences with dark colours, such as those at the top of the burning rig as Mike and Andrea prepare to jump off into the night sea, or the scenes in Francis's lab in *Deadpool* (Ultra HD Blu-ray), can sometimes appear bolder and more inviting on the OLED65E7 than on even the best LED-lit LCD displays, as these tones are not being impeded by issues derived from backlight/edge-lighting engines.

So, has LG completely perfected the way its OLED TVs handle dark colours and near black areas? Not quite. Sometimes, picture areas that contain lots of subtle detailing can exhibit quite pronounced speckling noise.

**'This OLED screen can be watched from almost any angle without losing contrast or colour saturation'**

This was a niggle that was there to some extent on 2016 models too, but I've found it's become more noticeable this year – presumably because of the overall increased brightness of the image.

There's an issue with bright HDR footage as well. Colours may look impressively intense during dark scenes courtesy of that pixel-level lighting, but when real brightness is required the OLED65E7 doesn't have enough nits at its disposal to deliver the more life-like colour volumes (brightness applied to colour) that are achievable with ultra-bright LCD rivals. Both Sony's 55XE9305 and Samsung's QE65Q9F have impressed me more in this regard.

Getting back to the good news: the extra brightness LG has implemented for its 2017 OLEDs does work wonders on the overall balance of light in HDR images. Provided you use the Standard picture preset, the previous issue where low-lit portions of an image could appear too dominant – and short of shadow detail – pretty much disappears.

## SPECIFICATIONS

**3D:** No **4K:** Yes, 3,840 x 2,160 **HDR:** Yes, HDR10; Dolby Vision; HLG; Technicolor **TUNER:** Yes, Freeview HD, plus CI slot **CONNECTIONS:** 4 x HDMI inputs; 3 x USB; optical digital audio output; Ethernet; RS-232 **SOUND (CLAIMED):** 60W (including 20W subwoofer) **BRIGHTNESS (CLAIMED):** 1,000 nit peaks **CONTRAST RATIO (CLAIMED):** N/A **DIMENSIONS (OFF STAND):** 1,461(w) x 877(h) x 62(d)mm **WEIGHT (OFF STAND):** 21.2kg

**FEATURES:** WebOS 3.5 smart system; built-in Wi-Fi; USB multimedia playback; built-in soundbar with Dolby Atmos audio decoding from streamed content; Freeview Play catchup TV platform support; Netflix, Amazon and NowTV apps built in; HDR effect; Magic Remote; Picture-On-Glass design

## PARTNER WITH



**LG UP970:** Available for around £350, the UP970 is LG's debut Ultra HD Blu-ray player. Wi-Fi-enabled and 3D-compatible, the deck will support Dolby Vision disc playback once firmware has landed – which may even have happened now...

If you use either of the TV's two Cinema presets, which are much less bright, the problem resurfaces, to an extent. This is something of a shame as the Cinema presets suffer less with noise than the Standard one. But in the end, if you're a 4K HDR fan (and I suggest you should be matching this display to as much 4K HDR content as you can get) you'll likely find the Standard setting preferable overall, especially if your viewing environment typically includes a level of ambient light.

I have two more strong positives to report concerning the OLED65E7's image quality. First, in keeping with all OLED displays, this bigscreen can be watched from almost any angle without losing contrast or colour saturation, which will be a benefit to a majority of typical setups, I'd imagine.

Second, the TV delivers on its native 4K resolution superbly. It improves on last year's 4K efforts via a combination of better motion processing (this TV suffers with less unwanted side effects and reduces judder more naturally) and superior upscaling of HD sources, even with relatively noisy material such as the Blu-ray of *300*.

## Accepting all challengers

LG's OLED TVs entered 2017 with some significant challenges to overcome. Brightness limitations were potentially going to be exposed by LCD rivals – particularly Samsung's new QLED models – and the brand is also facing more OLED competition than ever, now that Philips, Sony and Panasonic have all joined the bigscreen OLED brigade.

Impressively, though, the OLED65E7 delivers enough unique appeal in its design, audio performance and imagery to still make it a compelling proposition. I can't see how any buyer would be disappointed ■

**3. LG's integrated Atmos soundbar accepts DD+, but not TrueHD, bitstreams**

**4. The E7 measures just 4mm deep for much of its body**

## HCC VERDICT



### LG OLED65E7

→ £5,000 → [www.lg.com/uk](http://www.lg.com/uk)

**WE SAY:** Thanks to its increased brightness and improved processing, the OLED65E7 is easily LG's best OLED TV yet. Better value than the top-end W7 model.

The fearsomely specified Oppo UDP-205 wants to be all things to all AV geeks, says [Steve May](#). Don't just buy it to watch movies...

# Universal soldier lives up to the hype





George Lucas famously declared that sound was 50 per cent of the movie-going experience. Much the same could be said of Oppo's flagship UDP-205 Blu-ray player – this is just as much a high-end music machine as it is a cutting-edge UHD disc spinner, aimed at those who won't compromise when it comes to system sources.

Like the BDP-105D before it, this Oppo is a do-it-all media player with integrated high-end DAC. However, this time around we've traded Darbee Visual Presence processing (Oppo says there's no 4K algorithm yet available from Darbee) for genuine 4K playback and upgrades beneath the bonnet.

There's little the UDP-205 won't spin or play. In addition to 4K Blu-rays and their 1080p trailer park cousins, it's compatible with Super Audio CDs and DVD-Audio discs, plus DVD, CD and all manner of high-res audio files.

Naturally, the player supports HDR 10 encoded Blu-ray discs from out-of-the-box, but Oppo has also promised a firmware update for Dolby Vision, which is finally beginning to appear on some UHD platters.

This is either going to be great news if you have a TV that supports Dolby Vision, or irrelevant if you've bought one which doesn't. Given that the firmware hasn't dropped at the time of this review, there's not much more to add.

### A unique proposition

In addition to its universal ethos, the UDP-205 has connective talents, processing tricks and construction niceties that separate it from the sub-£1,000 competition. Put simply, there's nothing on the market quite like it.

At 10kg, the UDP-205 is even heavier than its predecessor, a result of an all-new double-layered chassis design and heavy feet for additional isolation. Temperature control comes from heatsinks and ventilation grilles rather than an in-built fan. The front fascia sports an undulating brushed aluminium finish. You half expect to find Tony Stark inside.

A glance at the rear panel confirms the Oppo's versatility. Uniquely for a 4K Blu-ray player, it offers both balanced and unbalanced stereo analogue outputs, as well as a full bank of 7.1 analogue outs. The latter are principally for music-only multichannel audio use; I suspect a shift to object-based audio systems like Dolby Atmos and DTS:X has largely removed their appeal when it comes to use in conjunction with video content.

Of the two HDMI outputs, one is a primary v2.0 terminal and the other an audio-only v1.4 connection, as is customary on first-wave 4K players. There's also an HDMI input, allowing the Oppo to be used as a system hub, but it's important to note that this doesn't accept HDR sources, which rather limits its attraction if you want to route through a PlayStation 4 or Xbox One S.

The audiophile features that separate the UDP-205 from its more affordable UDP-203 stablemate (HCC #269) include an asynchronous USB-B input, which claims to reach 768kHz PCM and DSD512. And, unlike the single AKM solution of the UDP-203, this model actually employs two top-of-the-line 32-bit ESS Sabre ES9038PRO DACs, one assigned to the stereo audio output, the other to those multichannel outs. The player also incorporates a headphone amplifier, good enough to drive high-quality cans, that connects directly to the stereo-handling DAC. This is touted by Oppo as a big step up on the headphone amp in 2013's BDP-105D.

Want more connectivity? No problem. There are both optical and coaxial digital outputs (I suppose *someone* might partner this with a soundbar); a trio USB inputs (one front-mounted); Ethernet for a wired network connection; and dual-band Wi-Fi. Furthermore, reflecting where this player is likely to end up, there are 12V trigger and RS-232 options for control system integration.

The supplied IR remote is much like every other Oppo doofer. It's large with big buttons, which at least helps when mucking about in a dark room. One button of

### AV INFO

**PRODUCT:**  
Audiophile-grade Ultra HD Blu-ray player

**POSITION:**  
Oppo's range-topper, above the UDP-203

**PEERS:**  
Sony UBP-X800;  
Panasonic DMP-UB900

**1. The UDP-205 is a full-width player weighing 10kg**

**2. The handset's backlight kicks into action as soon as it is picked up**





3

interest is the HDR key, which allows you to cycle through Auto, Forced, Off and Strip Metadata functions. The Forced output enables HDR, regardless of whether the display can handle it or not. In Off mode, all HDR is converted to SDR/BT709. Strip Metadata retains BT2020 colour info, but removes HDR metadata from a signal. Oppo suggests its use in projector-based systems, as it will enable owners not to run their PJ's lamp in high power mode (a typical result of feeding an HDR signal), while preserving a wide colour gamut.

Don't look for a Netflix button on the remote: the player offers no integrated support for third-party streaming services. It's here that it loses ground to both Panasonic's DMP-UB900 (HCC #259) and Sony's UBP-X800 (see

**'At times, 4K HDR images are achingly gorgeous. You'll want to hit Pause and drink in the detail'**

p54). The absence of integrated music services is a sore point given the audiocentric positioning. As for the likes of Netflix, BBC iPlayer and YouTube, I guess you could always plug an Amazon Fire TV media streamer into that HDMI input.

### Speed demon

As well as its MediaTek SoC, produced in collaboration with Oppo, the UDP-205 features a bespoke disc loader, and it's a blinder. The tray is reassuringly sturdy in operation, and a heavily-authored movie test disc flits from tray to menu screen in just 34 seconds.

With a 4K platter in place, you can relax and enjoy the Oppo's outstanding picture quality. At times, 4K HDR images are achingly gorgeous. When Alice breaches the Umbrella Corporation headquarters (*Resident Evil: Afterlife*,

Ultra HD Blu-ray), dispensing legions of black-clad troopers, the onscreen refinement takes several re-watches to digest. The Alice-ensemble open fire, anything and everything made of glass shatters or explodes; gun-mounted torches glint with peaky intensity; and the concrete floor erupts under fire – you can almost taste the masonry dust. Suddenly the whole of Shibuya disappears into a gleaming HDR white hole, at the centre of a highly detailed Tokyo cityscape. You'll want to hit Pause and drink in the detail.

With the UHD format comes plenty of user tweaking, more so than with its 1080p forebear. The player's output resolution will typically be set to Auto, however a Custom setting allows you to tinker with resolution and frame-rate. There's also a Source Direct mode.

Colour space and bit-depth is adjustable between 4:2:0, 4:2:2 and 4:4:4, and 8-, 10-, or 12-bit. This should ensure no display incompatibilities. If you experience banding issues, selecting 10-bit or lower will most likely sort it. During my audition, no picture anomalies were noted, and test patterns confirm the Oppo offers a full resolution output, with high-frequency detail intact and unqualified colour gamut.

Brightness, contrast, hue, saturation and sharpness settings can be assigned to three playback modes, while a Target Luminance function allows you to optimise the UDP-205's HDR to SDR conversion. The idea is to set the output to best match your TV or projector. This is presented as an adjustable scale, with a default of 300 nits, and an upper register of 1,600.

Standard Blu-rays are upscaled to 2160p when the machine is in Auto mode. Source Direct leaves them in 1080p, letting your display take over the process. Upscales tend to look smoother. The lavish costumes in *Gods of Egypt* (Blu-ray), with their gold braids and ridiculous bling, gain a better-than-costume-jewellery sheen. When Horus and Set have their first spat in their battle to be crowned King of the Green Screen, my display sparkles with detail.

4







Switching to audio, the UDP-205 lives up to its billing. This is a blisteringly precise CD player, able to offer extreme levels of articulation and transparency. Its audio performance over HDMI is deliciously good, and even better via the dedicated stereo output.

File support is comprehensive. It plays DSD up to 11.2MHz as well as multichannel DSD 64/128 (the latter converted to PCM), plus 192kHz/24-bit ALAC, AIFF, Ape, FLAC and WAV.

Users are granted management of no less than seven filters for the ES9038 Sabre DAC. A clear play to attract



## SPECIFICATIONS

**ULTRA HD:** Yes **HDR:** Yes. HDR 10 and Dolby Vision (future firmware) **UPSCALING:** Yes. To 2160p **MULTIREGION:** No. Region B BD/R2 DVD (Ultra HD discs are region-free) **HDMI:** Yes. 2 x HDMI outputs (Main v2.0/Audio only v1.4); 1 x HDMI v2.0 input **MULTICHANNEL ANALOGUE:** Yes. 7.1 analogue output (plus balanced XLR and phono stereo output) **DIGITAL AUDIO:** Yes. Coaxial and optical input; coaxial and optical output **ETHERNET:** Yes **BUILT IN WI-FI:** Yes. Dual-band **SACD/DVD-A:** Yes/Yes **DIMENSIONS:** 430(w) x 123(h) x 311(d)mm **WEIGHT:** 10kg

**FEATURES:** USB x 3; HDR-to-SDR converter; variable bit-depth and colour subsampling; DLNA media playback; iOS and Android app control; headphone output; ESS Sabre ES9038PRO DACs; hi-res file compatibility incl. multichannel DSD

## PARTNER WITH



**ARCAM AVR850:** Arcam's £4,500 seven-channel receiver utilises advanced Dirac room/speaker optimisation and the brand's usual Class G amplification. Combine it with Oppo's UDP-205 for a premium AV experience.

audiophiles, there's much fun to be had experimenting. The default is Mini Phase Fast, which is deemed by Oppo engineers as the best all-round option.

At times, the player sounds clinical, even dry (I think it's fair to be ultra pedantic on home cinema sources selling for £1,400), but suddenly there will be a collusion of content and decoding that connects in the way only real high-end audio does – ELP's Greg Lake opining 'Still... You turn me On' from *Brain Salad Surgery* (24-bit/96kHz, DVD-Audio) provide one such joyous moment. Similarly, Steven Wilson's spectacular remix of Hawkwind's *Warrior On The Edge of Time* (CD/DVD boxset) is positively gargantuan, and the original stereo master of *Assault and Battery/The Golden Void* is particularly immense. The latter track is a surging prog rock classic, but can be reduced to a trippy hash if you're unlucky. Thankfully the Oppo's DAC finds precision amidst the haze. There's flute and cow bell, raging synth and miscellaneous electronica. Hi-hats sound distressed but you can't journey to *The Edge of Time* and not expect a little distortion. Tortuous feedback induces Roundhouse flashbacks. This is all a good thing in my book.

## Indisputably excellent

If you're looking for the ultimate UHD Blu-ray player, then the UDP-205 is indisputably it. No other deck offers quite so much, or executes it as well. Its video performance is fabulous – but then so is that from most of the competition. The key reason to spring for this over Oppo's own UDP-203, or more affordable alternatives from Panasonic and Sony, is its audiophile versatility. That high-performance DAC and dedicated stereo output are a major attraction – although let's not undervalue its class-leading build quality, either. The UDP-205 is a formidable battleship of a Blu-ray player. To use one is to want one ■

**3. Use the HDMI input to route external (non-HDR) sources through the UDP-205**

**4. Front-facing inputs are a USB port and headphone output**

## HCC VERDICT

★★★★★

### Oppo UDP-205

→ £1,400 → [www.oppodigital.co.uk](http://www.oppodigital.co.uk)

**WE SAY:** An extraordinary universal disc player that wears its lab coat with pride. Superb video performance, reference-quality audio and impeccable build – this Oppo is pricey but peerless.

# A big black box of terrifying tricks

GoldenEar's flagship SuperSub XXL is for those moments when you need serious bass. **Ed Selley** goes deep



## AV INFO

### PRODUCT:

Dual 12in (plus dual passive) subwoofer

### POSITION:

Above the SuperSub X, which uses 8in active drivers

### PEERS:

SVS SB-16 Ultra;  
Bowers & Wilkins  
DB1-D3

**HOME**  
**CINEMA**  
Choice  
**RECOMMENDED**



**ONCE YOU HEAD** past the £2,000 point, subwoofers tend to get a little on the serious side. This is rarefied territory with devices that offer subsonic bass and the sort of impact you'd associate with letting off a grenade in your room. In the case of US brand GoldenEar, this asks some interesting questions.

You see, we've already looked at the SuperSub X in HCC #272, and despite it being a relatively dinky little thing, the performance it offers is seriously impressive. So what happens when you scale it up?

The SuperSub XXL is – as the name suggests – like the SuperSub X but bigger. This means it dispenses with the twin 8in drivers of the smaller model and brings in a pair of 12in units. These are arranged, again, in an opposed pair and are again complemented by passive radiators on the upper and lower surfaces of the cabinet. The thinking is that this arrangement applies equal forces on the sub and keeps it stable. Power rises from a claimed 1,400W in the compact model to a gloriously over-the-top 1,600W in this one, again generated by a Class D amplifier.

The radiating area that the SuperSub XXL offers is huge, so in order to keep this anchored the weight stands at just a whisker under 40kgs. In other words, it's very heavy, and remains completely inert even under extreme provocation. Like the smaller model, the SuperSub XXL sits on soft rubber feet for additional stability.

Unfortunately, some of the limitations of the SuperSub X are carried over here. It makes use of what GoldenEar describes as 'discrete multi-band limiting, phase-perfect equalization', but none of the parameters it operates on are user adjustable. Control is limited to a crossover (which can be bypassed) and a volume control. There's no phase adjustment, no balanced input and none of the configuration options that many rivals at this price point offer. If you want wireless hookup or app control you need to look elsewhere. There isn't even a remote control. It's very much a sub that is left to be governed by your AV receiver or processor. I found it also shared its smaller relative's habit of producing an audible mains hum (in my system, with my Yamaha AVR) unless considerable attention was taken with cabling.

Equally, some of the positive attributes of the small sub make the journey across. The SuperSub XXL is beautifully made and exceptionally well finished, with the piano lacquer being free of any imperfections. It is also fairly unconcerned by positioning. With no port and the cabinet being as inert as it is, it doesn't suffer from placement close to a wall, although I have found that the best results are achieved with a little space around it.

## Subtle differences

Given that the small SuperSub X is capable of generating levels that are beyond what most of us would get away with in a domestic environment, you could wonder what purpose the larger one serves. In reality, if you have set your levels honestly, the SuperSub XXL isn't going to do a huge amount more than its fearsome little brother, but there are differences. The same output levels can be achieved at lower volume settings and this gives the SuperSub XXL an effortlessness that is only really apparent when you switch to something less mighty.

Play a sequence with serious low-end and the GoldenEar is staggering. The scene-setting series of extremely low notes buried in the soundmix at the very beginning of *Edge of Tomorrow* (Blu-ray) is simply

## SPECIFICATIONS

**DRIVE UNITS:** 2 x long-throw 12in opposed drivers; 2 x 13in x 15in opposed quadratic passive radiators **ENCLOSURE:** Sealed **FREQUENCY RESPONSE (CLAIMED):** 10Hz-250Hz **ON BOARD POWER (CLAIMED):** 1,600W ForceField digital amplifier **REMOTE CONTROL:** No. **DIMENSIONS:** 502(w) x 403(h) x 448(d)mm **WEIGHT:** 37.2kg **CONNECTIONS:** Stereo phono input; LFE input

## PARTNER WITH



**EDGE OF TOMORROW:** This Tom Cruise sci-fi actioner/black comedy is a superb disc for letting a subwoofer showcase its mettle – the DTS-HD MA 7.1 mix drips with bruising bass from literally the movie's first moments. Roll on the sequel...

awesome. The tone isn't particularly audible, just felt as a wave of pressure that loads the room and exerts a palpable force on the ribcage. This means that mere artillery explosions and transport ships crashing to the ground are handled with utter indifference. Crucially, the move to larger models hasn't caused any appreciable increase in the response time of the GoldenEar driver, and it starts and stops with commendable agility.

Where the SuperSub XXL is also very strong is that it maintains its lush performance all the way to the crossover points of relatively small speakers. For periods of my audition I used the woofer in conjunction with my titchy Elipson Planet Ms, which are pretty much dead below 90Hz. Set that as a crossover point and the GoldenEar proves absolutely imperious throughout the frequency range. Of course, it's unlikely that most owners would be using speakers that small – but it's nice to know that they could. With the brooding atmospherics of *Nightcrawler*'s Blu-ray soundtrack, this premium sub slickly fills the lower octaves with well-integrated and detailed bass.

Perhaps inevitably, the weaknesses of the SuperSub XXL are similar to those of its brethren. Ask it to play music and while bass remains impressively deep, it still doesn't have the sheer speed needed to be truly involving. This is still a sub I'd be happier to recommend for movie work than as a system-crossing all-rounder.

And whether you should choose to spend almost £1,000 more on the SuperSub XXL over the more compact and almost equally devastating SuperSub X is a tough question. For most setups in the UK at least, the extra oomph it offers, plus the lower extension (it's rated down to 10Hz, whereas the smaller model is rated to 12Hz) simply aren't performance traits that will be required much of the time.

So in terms of value, I rate the SuperSub X the better bet. If you have the budget for it, though, and a cavernous system that demand a subwoofer that generates astonishing low-end extension from a (fairly) sensibly-sized cabinet, you really need to put this on your shortlist ■

**1.** The sub features twin 12in active drivers, plus two 13in x 15in passive radiators

## HCC VERDICT




### GoldenEar SuperSub XXL

→ £2,300 → [www.goldenear.com](http://www.goldenear.com)

**WE SAY:** You'll need plenty of room to show off its true virtues but this GoldenEar is awesomely good fun. Not a woofer for those who like to tinker, though.

# A new height for LG sound?



**Mark Craven** enjoys the SJ9's performance, but Atmos audio isn't the standout feature

LG's SJ9 is the company's first Dolby Atmos-enabled soundbar, a product category that has slowly grown since Yamaha's innovative YSP-5600 launched in 2015. Priced at a considerable £1,000, it's a premium option that should deliver on its promise. So, does it?

In terms of form, it follows the design principles of Phillips' SkyQuake (HCC #271). This means that it's a single-bar design, joined by a subwoofer, and there are no additional rear speakers, *a la* Samsung's HW-K950.

The two boxes combine to create, in LG's words, a 5.1.2 system. This will raise eyebrows amongst the AV cognoscenti. Certainly, the soundbar offers dual upfiring drivers for those Atmos heights, but claiming five surround channels from a lone cabinet (and from only five mid/tweeter pairings) reads like a bit of wishful thinking.

The SJ9 soundbar is big, but attractive. At around 1.2m wide, it's a style match for TVs 55in and above, but nothing below. It was a snug fit on top of my AV cabinet. The 'bar

wears a wraparound grille and rounded edges, and doesn't stand high enough to mess with a flatscreen's IR sensor.

Illuminated behind the grille is an LED status light and text window, which is at least big enough to display information (HDMI IN, for example) without having to scroll two letters at a time. This window can be set to dim automatically after 15 seconds.

In a rear recess space you'll find ports for HDMI input and output, a 3.5mm jack, digital optical audio input and Ethernet. On top of the latter, the SJ9 offers Bluetooth and Wi-Fi connection for multimedia interaction.

That HDMI input is key to the LG's Dolby Atmos ambitions. Hook up your BD deck (set to bitstream output) and the SJ9 will map a movie's Atmos signal to its channel array. Then connect to your display via the bar's HDMI output (perhaps into your TV's HDMI ARC-enabled input) and you're ready to roll.

LG doesn't quote a crossover specification, but does suggest placing the system's subwoofer near the main unit. This is sensible, as in use it's clearly being tasked with



**AV INFO**

**PRODUCT:**  
5.1.2-channel Dolby Atmos soundbar

**POSITION:**  
Currently LG's most expensive soundbar

**PEERS:**  
Samsung HW-K950;  
Philips Fidelio  
SkyQuake;  
Yamaha YSP-2700

handling more than just sub-80Hz bass moments. The woofer is an easy-on-the-eye squat cube, rear-ported and, again, with curved edges. It has no controls on it whatsoever, and pairs wirelessly with the soundbar without you having to worry about it.

### Up and at 'em

The SJ9 has designs on being so much more than a common-or-garden TV audio booster, and the price tag to match, so I set it to work with movie soundmixes. And got off to a bit of an awkward start.

Beginning with *Arrival* (Blu-ray, DTS-HD MA 7.1) I failed to notice that my deck was set to Auto (audio) output, and the resulting soundscape would have sent the movie's Heptapods racing off to wherever they came from. For some reason, the 'bar (which supports the DTS 'core' but not the higher-res variant) routed the movie's dialogue channel through its subwoofer, and focused on surround info. The result being a surrealist experience with actors sounding like they were speaking from within a diving bell. A similar effect arose from *Allied*'s DTS-HD MA 5.1 mix.

The only way to resolve the issue was switching my Oppo player to Bitstream output (even though Auto works fine to send Dolby Atmos bitstreams).

This done, I could enjoy the SJ9's good traits. With *Arrival*'s nuanced, artful soundtrack, this 'bar sounds

**'Hook up your BD deck via HDMI, set it to bitstream and the SJ9 will map an Atmos mix to its driver array'**

wonderfully dynamic and full-bodied, mixing high-frequency clarity with a rich mid-range.

Nothing sounds unduly spitty, harsh on the ear, or over-emphasised. Instead, it sounds natural. For instance, in the movie's final scenes, the magnificent soundtrack fills the front soundstage with lengthy string notes, while Amy Adams' hopeful narrative is forward in the mix. It was enough to make me a bit emotional.

**1. The SJ9 features front-, side- and up-firing drivers**





## SPECIFICATIONS

**DRIVE UNITS:** 2 x front; 1 x centre; 2 x surround **AMPLIFICATION (CLAIMED):** 5 x 43W (plus 200W for subwoofer) **CONNECTIONS:** HDMI input; HDMI output (ARC); optical digital audio input; 3.5mm aux input; Ethernet **DOLBY TRUEHD/DTS-HD MA:** Yes/No. Lossy DTS **SEPARATE SUB:** Yes. 6.5in, ported **REMOTE CONTROL:** Yes **DIMENSIONS:** 1,200(w) x 58(h) x 145(d)mm **WEIGHT:** 5.6kg

**FEATURES:** Wi-Fi; Bluetooth; HDCP 2.2 on HDMI input/output plus 4K HDR passthrough; LG MusicFlow multiroom/home cinema mode; Chromecast; Spotify Connect; ASC (Adaptive Sound Control), Standard, Music, Movie, Bass Blast DSP modes; Dolby Atmos bitstream decoding; Tone Control; Auto Volume Leveller

## PARTNER WITH



### GOOGLE CHROMECAST:

The Big G's free tech is a handy addition to the streaming landscape, making smart device hookup tap-and-play. Supported apps include the likes of YouTube, Spotify and Google Play Music.

Bass impact, too, is really quite something. When the Heptapod craft moves upwards in Chapter 11, the accompanying low-frequency rumble starts faint but builds in size and volume. It feels like a genuinely physical moment to match the onscreen action. Elsewhere, Foley effects have a delicious kick to them, rather than an unfocused boom.

Dialogue is delivered well, too. Whether it's Adams' somewhat breathy delivery or Forrest Whitaker's more gravelly tones, they sound distinct and believable, benefitting from the SJ9's dedicated centre channel

**'Bass impact is quite something – Foley effects have a delicious kick, rather than an unfocused boom'**

drivers. Which is just as well, as while there are treble, bass and subwoofer adjustments on the half-pint handset, there's no control over dialogue volume. Of the pre-defined EQ settings (which aren't available with Atmos material), I opted for Movie.

## In a flap with Atmos

The Atmos effect, which should be the SJ9's crowning glory, is a bit of a mixed bag. Naturally, I began testing its mettle with some of Dolby's own Atmos trailers – I like to think I know how these are meant to sound, having heard them countless times including at Dolby HQ. And it becomes clear that the LG system can imbue height, but not width, to its soundstage.

The *Amaze* trailer is a case in point. The soundbar's display flags up 'Dolby Atmos' to let you know everything is ticking over correctly, and then sounds of bird noise, jungle beasts and bulging bass come through with admirable clarity and fidelity. But when the trailer promises 'Full 360° Sound', and the sound of a flapping bird commences, it only ever flaps in front of you, albeit in a noticeable arc. Similarly, the following rainforest downpour has a vertical element to it, but it doesn't originate from overhead.

I found myself moving my listening position forward to get closer to the LG's reflected sound (much closer than I would normally sit), and while this made me more aware of soundtrack information thrust left and right, it didn't magic up a genuine surround or overhead experience.

So is it a busted flush in this regard? Not entirely. The bar succeeds in sounding more expansive than stereo rivals, with greater FX separation and height. With *San Andreas* (Dolby Atmos, Blu-ray), this equates to a nicely layered soundmix. When Dwayne Johnson and Carla Gugino steer a motorboat over a tidal wave and almost get squashed by a container ship, the SJ9 has enough artillery to make space in its soundstage for whirring propellers and falling containers, while egging you on to look upwards. But it really stands out because of its weighty but unfatiguing presentation, rather than its Atmos efforts.

There's more to the SJ9 than movie playback. Its talents are numerous. It will happily pass a 4K HDR signal via its HDMI connections, and can be paired with additional LG wireless speakers to make a 5.1 setup (Home Cinema Mode, not actually Atmos compatible). It can become simply another zone in an LG multiroom setup, has Google Chromecast built-in for app-streaming simplicity, takes over-the-network firmware updates, supports hi-res FLAC playback and 24-bit upsampling of lower-quality files, and comes with a DSP mode called Bass Blast (not really my cup of tea). But it won't accept a DTS:X bitstream.

To sum up, the SJ9 is successful when it comes to sheer audio fidelity. It has a big sound to complement its big dimensions. It's capable of going very loud, but has balance, detail and smoothness to go with it. Operation is a bit fiddly (the MusicFlow app can cause headscratching and after failing to get the SJ9 to find my Wi-Fi network I had to dig out an Ethernet cable), but the feature-set is rich. LG's best soundbar yet ■

**2. Physical controls (including Wi-Fi pairing) are tucked away on the soundbar's rear**

## HCC VERDICT



### LG SJ9

→ £1,000 → [www.lg.com/uk](http://www.lg.com/uk)

**WE SAY:** Dolby Atmos playback isn't the most convincing spatially, but this premium soundbar is impressive in other areas. Dynamic presentation and well-connected.



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# A worthy successor to players of old

Sony's UHD Blu-ray player debut is a slam dunk, impressing as much with audio as it does with super-charged video. **Steve May** breaks out his esoteric music collection

**IT'S PROBABLY FAIR** to say Sony hasn't exactly rushed an Ultra HD disc spinner to market. Yet despite the delay, and mixed messages sent with the PlayStation 4 Pro, this debutant is very much worth the wait.

The UBP-X800 isn't just a 4K Blu-ray player, it's a universal media machine. In addition to handling Blu-ray and DVD, it spins Super Audio CDs and DVD-A discs, and plays a wide variety of media files, including DSD up to 11.2MHz. In terms of audiophile ambition, it's comparable to the likes of Oppo's UDP-203 and, to a lesser extent, Panasonic's DMP-UB900, only not as expensive.

Design-wise, it builds upon last year's UHP-H1. That deck was a slightly mistimed, but nonetheless excellent Blu-ray player that signalled a significant step up in Sony's premium disc game. Here the brand continues on the same trajectory, albeit with extra pixels.

Refreshingly, the player is a full-width 430mm model. Visually similar to its predecessor, it sports a glossy fascia and distinctive textured top lid. There's no display to speak of, just an LED lamp above gold 4K HDR and Hi-Res Audio stickers.

Connections include two HDMI outputs, one v2.0 and HDCP 2.2 enabled, the other an audio-only v1.4 output for those with legacy AVRs who need to route video directly to a TV or projector. Hidden under a cover is a front-facing USB 2.0 port, with a second on the rear.

Perhaps oddly for such an overtly musical player, the UBP-X800 has no analogue outputs, only a single digital audio coaxial. Optical would have been nice.

## Heavy metal

Beneath the lid, Sony has reinforced the chassis to dampen resonance, and added rigidity to its frame-and-beam design with 1.2mm struts. It's also used two 'foot beams' linking the player's rubber boots. It's a heavy 3.8kg.

The attention to detail throughout is typical of Sony's audio design team, and bears the clear stamp of Takashi Kanai, who has been responsible for a string of classic Sony hi-fi kit over the years: a newly developed metal top plate has deliberately offset screws, said to improve sound performance. Take that with a pinch of salt, but you've got to love the sentiment. Even the heatsink has unusual 'fins' spatially placed for maximum audiophile effect.

Powered up, you're presented with a business-like GUI. The Home screen is simply a tiled interface offering quick access to features and functions. This can be customised by adding additional content sources as you need them.

You'll find most of the key streaming services onboard: Netflix, Amazon Video, Wuaki.tv, BBC iPlayer, YouTube, Demand 5, and Spotify Connect. Amazon, Netflix and YouTube all support 4K streaming, although (at the time of writing) only Netflix offers HDR playback. The deck also supports Miracast screen mirroring from compatible devices and is DLNA compliant (Ethernet or Wi-Fi). It immediately identified my NAS and Twonky Media servers.

Image quality is tremendous, both with vanilla Blu-rays and flake-and-sprinkles UHD. Spinning a 4K resolution test

## AV INFO

**PRODUCT:**  
Ultra HD Blu-ray/  
universal disc player

**POSITION:**  
Sony's first UHD  
Blu-ray machine

**PEERS:**  
Panasonic  
DMP-UB900;  
Oppo UDP-203;  
LG UP970







disc, the UBP-X800 puts everything onscreen, with no apparent artefacts or anomalies. Colour rendering is accurate and gradations smooth.

There's no control over bit-depth output here. Instead, the Sony automatically sends across the maximum amount of data within the capability of a connected device. The standard for UHD discs is 10-bit, but if your display is 12-bit-capable, then the deck will send a 12-bit signal.

Got a new UHD TV? When you play a 4K 60p disc, the player delivers a 2160p60 signal with Deep Colour at 12-bit and chroma at 4:4:4. Depending on the connected display, the amount of information is reduced sequentially. Consequently, if you have an early 4K TV, then the player will play the same disc as 2160p, SDR, 8-bit and 4:2:0.

Sony tells me the deck has had tuning input from gurus at Sony Pictures Entertainment, which is somewhat reassuring, considering the quality of that studio's 4K disc releases. Angelina Jolie's *Salt* (4K Blu-ray) plays like a studio master – detailed, stable and balanced.

**'Standard Blu-rays often look as enticing as UHD platters – I'm sure I saw fresh detail in *The Force Awakens*...'**

When it comes to HDR, the deck spins HDR 10, but not Dolby Vision. Its absence here is curious, considering the brand's support for DV on its new TVs. It's almost certainly a timing and development issue, yet from what I can gather, Sony has no plans to offer a firmware update.

Those with a 4K resolution screen or projector that lacks HDR can engage an HDR-to-SDR converter (HDR output can also be switched off in the Screen Settings menu regardless of the talents of the display). Unlike Panasonic's solution, this conversion isn't adjustable, but uses a proprietary algorithm to map peak brightness and colour gradations.

Significantly, standard Blu-rays often look as enticing as UHD platters. So much so that I'm sure I saw fresh delights in *Star Wars: The Force Awakens*. Fine detail and textual nuance is tremendous.

The Options menu brings up some adjustable parameters, such as custom settings to reduce block and

## SPECIFICATIONS

**ULTRA HD:** Yes **HDR:** Yes. HDR 10 **UPSCALING:** Yes. From SD and HD to 2160p **MULTIREGION:** No. Region B BD/R2 DVD (Ultra HD discs are region-free) **HDMI:** 2 x outputs (1 x v2.0a; 1 x v1.4 audio-only) **MULTICHANNEL ANALOGUE OUTPUT:** No. **DIGITAL AUDIO OUTPUT:** Yes. Coaxial **ETHERNET:** Yes **BUILT IN WI-FI:** Yes **SACD/DVD-A:** Yes/Yes **DIMENSIONS:** 430(w) x 50(h) x 265(d)mm **WEIGHT:** 3.8kg

**FEATURES:** Bluetooth with LDAC; USB x 2; iOS and Android app control; HDR-to-SDR converter; streaming services including Netflix, Amazon Video, YouTube (all 4K); DLNA media playback; AAC, ALAC, DSD, FLAC, WMA, MP3, MKV, MPEG file compatible; JPEG playback; DSEE HX audio upscaler; Frame and Beam chassis

## PARTNER WITH



**SONY KD-55XE9005:** Not one of the brand's top-flight TVs, but priced accordingly – this 55in Bravia sells for around £1,700 and favours a local dimming LED backlight rather than Slim Backlight Drive edge tech. An impressive mid-ranger.

mosquito noise. There are also Brighter Room and Theatre Room modes for non-HDR content.

Using the underside of the orbiting Star Destroyer from *The Force Awakens* (Chapter 6), largely shadowed as it disgorges First Order Stormtroopers, it's easy to see what a difference these latter modes can make. Theatre Room offers maximum contrast; detail is held in the starship's shadows but is difficult to pick out in a moderately-lit room. The Brighter Room mode lifts the average picture level – the underside of the Star Destroyer looks brighter, but deep space lightens, too. A Direct mode sits somewhere between, and is probably the best of the viewing options.

The X800 has ears as big as its eyes. This is a flat-out great audio player, and I'm quick to conclude that the lack of analogue audio outputs is no great loss. Pure audio over HDMI sounds ludicrously good. Complex five-channel mixes unspool with clinical precision. Remixed classic rock and soft jazz open up like time-lapse roses. I can discern instruments, and the space around them.

*Reptile*, by Eric Clapton, from the album of the same name, in DVD-A multichannel, is delicate and airy. The high-frequency electro riffs of Mannheim Steamroller's *Leonardo* show the player off in similarly advantageous light, exposing layers and textures in the soundstage.

The UBP-X800 sounds as good as any ES disc player I've heard from the Sony stable, and would have no qualms about placing it in my system. Throw in its UHD prowess, solid construction and sensible price tag and you have a seductive offering ■

**1. Format support includes HDR 10, but not Dolby Vision**

**2. The player has a clean look and uses a frame-and-beam chassis design**

**3. Despite the deck's universal nature, Sony offers no analogue audio outputs**

## HCC VERDICT



**Sony UBP-X800**

→ £400 → [www.sony.co.uk](http://www.sony.co.uk)

**WE SAY:** Offering sensational images and excellent audio, Sony's belated universal disc spinner is a brilliant buy. Unless you're worried about optional HDR variants...





**FLYING  
THE FLAG**

Mark Wahlberg is  
everywhere in  
*Patriots Day*  
on Blu... p94

The Q8C is another QLED TV, but offers a different design and different illumination tech to its pricier sibling. [John Archer](#) reports

# Samsung's charge of the light brigade



While Samsung's first generation of QLED TVs got off to a solid start with the 65in QE65Q9F in our last issue, that set's £4,900 price leaves it well beyond the reach of most buyers. Our attention now shifts to a more affordable step-down model: the £3,000, 55in QE55Q8C. Can Samsung's QLED panel tech still impress one rung down the ladder?

Well, firstly, there's nothing second-rate about this TV in the flesh. The design is appealing, although considerably different to the Q9F. Where that TV is all square-edged black menace atop two slender feet, this set has a gleaming metallic trim and rear panel, svelte black and silver bezel and chrome bar desktop stand. Whether you prefer it to the industrially monolithic Q9F will be a matter of taste.

There's another potentially divisive aspect of the set's design: its curved screen. Debates continue to rage over the pros and cons of curved TVs, and perhaps tellingly almost every other brand has now stopped selling them. There's no doubt, though, that being curved enhances the QE55Q8C's aesthetic appeal.

Further enhancing a slick package is Samsung's external connections box that hooks up to the display via a single, ultra-thin, nearly transparent cable. The result is a TV that looks as close to cable-free as any is likely to get.

This box houses connections for four HDMI devices (probably enough for most setups), all ready for 4K and HDR playback up to 60Hz. There are also three USB inputs, integrated Wi-Fi and Bluetooth support. It's slightly annoying that this Bluetooth support offers the only way to use headphones with this TV. There's no physical headphone jack.

The QE55Q8C's smart features are managed by Samsung's increasingly swift and flexible Eden interface, and include individual apps for all the 'big four' UK terrestrial TV broadcasters as well as Netflix and Amazon in 4K HDR.

## Dots the idea

For all its gorgeous looks, plentiful connections and swanky smarts, explaining the QE55Q8C's relatively high price ultimately falls to its QLED picture technology. So, briefly, QLED is the name Samsung has rustled up to describe its new type of screen technology that wraps Quantum Dots in a robust metallic sheath, allowing them to be driven harder to produce higher brightness levels and a wider colour range.

The screen does not, though, deliver on QLED's game-changing potential quite as potently as the Q9F. It's only claimed by Samsung to produce 1,500 nits of peak brightness versus the 2,000 nits of the Q9F, and this difference is noticeable in its less explosively punchy and vibrant HDR pictures (tested with HDR 10 content – the screen also supports the HLG standard and Samsung's newly launched HDR 10+).

However, while images aren't as outright dazzling as the Q9F's, they're still

among the brightest I've sat down to watch from a TV to date. The only sets we've auditioned so far that rival it apart from the Q9F are Sony's XE9305 (HCC #271) and ZD9 (HCC #267) models, and those models don't benefit from the extra colour range offered by Samsung's bespoke Quantum Dots.

This sheer brightness makes the Q8C extremely well-suited to vivid, colour-rich HDR material. With the right disc it can look mind-bogglingly good. *The LEGO Movie* on 4K Blu-ray is one such title – so intense and luminous do scenes such as those in Cloud Cuckoo Land look that it felt like I was watching a completely new transfer.

The TV's QLED-inspired talents aren't just about the old dazzle dazzle, though. There's also more insight into all those explosive colours than most TVs can show, especially in the brightest areas. HDR 'highlights' – such as light reflecting off the LEGO characters' plastic faces and clothes – no longer look slightly bleached white; you can now discern subtle lighting differences and colour details that make the image look much more precise and realistic. Well, maybe realistic isn't quite the right word when you're talking about a film featuring LEGO. But you know what I mean.

## Vibrancy and subtlety

Non-animated 4K Blu-rays such as Universal's *The Great Wall* benefit even more from the range of the QE55Q8C's colour reproduction. The boldly coloured armour of the Chinese guard enjoys an irresistible mix of vibrancy and subtle shading.

The TV's 4K resolution brings out the detail and texture that characterises most of the non-CGI photography in this Matt Damon monster mash. And this spectacular clarity hardly drops off at all during the film's action scenes, thanks to some superior motion handling.

The movie's night-time sequences showcase a strong black level performance. Many much less bright TVs fail to deliver such inviting deep black colours, and even fewer manage to retain as much detail in dark image areas (at least if you're using Samsung's well-judged Standard and Movie presets).

But as well as not being as bright as the top-tier Q9F, the QE55Q8C organises its edge LED lighting differently, firing its lights vertically rather than horizontally across the screen.

And this causes a problem.

Whenever a very bright object is shown against a dark backdrop, such as a torch or moonlit bit of armour during *The Great Wall*'s night-time battles, Samsung's vertical lighting implementation causes a quite defined stripe of light to appear down the full height of the image. It ranges over at least the width of the bright object the edge lighting is striving to reach.

## AV INFO

**PRODUCT:**  
High-end 55in  
4K HDR TV

**POSITION:**  
One step from the  
top of Samsung's  
2017 TV range,  
below the Q9F

**PEERS:**  
Sony KD-55XE9305;  
LG OLED55E7

1. The Q8C claims  
a 1,500-nit peak  
brightness output

2. Samsung's metallic  
finish extends to the  
TV's rear

3. The set ships with a  
Premium One Remote



This issue is even more noticeable if there are black bars above and below the picture (quite a regular occurrence for movie-watchers), and if you're viewing the screen from an angle of anything more than 25 degrees or so.

The most effective way to reduce the impact of this backlight striping is to activate the 'Calib Night' picture preset. However, this causes significant amounts of shadow detail to be crushed out of the image, so it's not an ideal fix.

Alternatively, you can reduce the power of the local dimming system or ramp down the TV's overall brightness – neither of which, again, are ideal solutions.

Another less commonly seen issue with the QE55Q8C is some banding showing up in large expanses of HDR colour as the TV fails to resolve tiny tonal shifts with sufficient subtlety. The swirling white clouds of the alien habitat in *Arrival*, for instance, clearly suffer with this issue.

## Superhero by day

These problems – especially the vertical backlight striping – are bound to sound off-putting to many *HCC* readers. This curved TV, though, has one talent up its sleeve that might just change your mind. Namely that its pictures hold up incredibly well against the polluting impact of a bright room environment.

Filters in its screen and the QLED lighting system combine to retain not just a picture's brightness and colour response but also its contrast. I find it genuinely incredible; one of those physics-denying achievements the TV world seems to throw up almost annually these days. And given that the light banding issue largely fades away in a reasonably bright room, the QE55Q8C is actually at its best in a room with at least a bit of light in it, rather than some blacked-out Batcave.

So I found myself become more enamoured of this 55-incher the more I used it on a day-to-day basis. For daytime TV viewing, sports broadcasts or a *Britain's Got Talent* binge, its hard to find fault (and there's a reasonably

## SPECIFICATIONS

**3D:** No **4K:** Yes. 3,840 x 2,160 **HDR:** Yes. HDR 10, HDR 10+, HLG **TUNER:** Yes. Freeview HD, Freesat HD **CONNECTIONS:** 4 x HDMI inputs; 3 x USB; RF input; composite video; Ethernet port **SOUND (CLAIMED):** 40W **BRIGHTNESS (CLAIMED):** 1,500 nits peak **CONTRAST RATIO (CLAIMED):** N/A **DIMENSIONS (OFF STAND):** 1,225.3(w) x 705.7(h) x 90.8(d)mm **WEIGHT (OFF STAND):** 20kg

**FEATURES:** Built-in Wi-Fi; USB multimedia playback; DLNA multimedia playback; Bluetooth headphone output; Eden smart system includes Netflix and Amazon 4K HDR apps; curved screen; QLED panel design; pause, rewind or record live TV (USB); Q processing engine; One Connect box; 'near-invisible' TV connection

## PARTNER WITH



**SAMSUNG M9500:** The Korean brand's second 4K Blu-ray spinner (£450) features the same curved design as the Q8C, and introduces new features, including Bluetooth sound to compatible headphones and BD streaming to your phone!

powerful, clean and wide soundstage from the TV's 40W-rated speaker system to keep your ears amused while you channel hop). Colour and brightness strengths come to the fore and worries about backlight foibles or HDR tone mapping fade away.

Potential buyers therefore need to ask themselves what sort of content they will mainly be viewing, and weigh up the QE55Q8C's considerable price tag ■

## HCC VERDICT



### Samsung QE55Q8C

→ £3,000 → [www.samsung.co.uk](http://www.samsung.co.uk)

**WE SAY:** While the QE55Q8C isn't particularly well suited to typical home cinema viewing conditions, its remarkable bright-light performance could be a saviour. Kinda expensive, though.



4. Display illumination comes from vertical-firing edge LEDs





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# Input lag? We don't need no input lag

This affordable Full HD beamer combines gaming-friendly speed with Darbee's real-time post-processing. The result has **John Archer** impressed enough to dig out his PlayStation controller

**THE RULES OF** home cinema technology are made, it seems, to be broken. Take for instance the Optoma GT1080Darbee projector. This DLP PJ claims to be both a great display for videogaming and the proud owner of an unusually powerful picture processing system – two features which experience and logic dictates make extremely bad bedfellows. Yet somehow the £780 GT1080Darbee makes it work.

You'd wouldn't guess at its ground-breaking nature from just looking at it, though. It's small, light and features some pretty rudimentary build quality. A glossy top panel and elevated lens barrel give it a modicum of cuteness, and it's well connected with twin HDMI's and a powered USB port that opens the way to using devices such as Google Chromecast, or Optoma's own optional wireless video transmission system. Overall, though, it doesn't manage to stand out from the sub-£1,000 projector crowd.

The clue to where the GT1080Darbee does stand out from its peers lies in the Darbee part of its name, as this refers to something seldom found on any affordable projector: a sophisticated video processing engine.

## Neuro-bio-what-ic?

When it comes to projectors, the DarbeeVision Visual Presence processing system is currently exclusive to Optoma. We're told it's the result of third-party research into how you can use neuro-biological algorithms to make

pictures look sharper, more contrast-rich and more three-dimensional without introducing any hardware changes. Owners of D-suffixed Oppo Blu-ray players will be familiar with the Darbee effect.

While this processing works well, as we'll see, you would expect it to cause a significant delay in how quickly a projector or TV produces its pictures, drastically undermining its usefulness as a gaming display. Somehow, though, the Darbee engine delivers its picture quality boost while keeping input lag (the time a display takes to render image data received at its inputs) to a respectable 33ms when using the Darbee Gaming setting.

You can reduce input lag to around 18ms if you turn Darbee processing off and activate a separate 'Game Enhance' mode instead. But, for me, the improvements the Visual Presence engine delivers to game graphics compensates for the relatively slight lag increase it causes.

The Darbee implementation in the GT1080Darbee carries three presets: Hi-Def, Gaming and Full Pop. Hi-Def is your go-to mode for watching TV shows and movies, and does manage to sharpen up the image and mildly widen contrast and colour ranges. It looks like the projector has suddenly found more pixels to play with, despite the fact that you're still watching the same HD source on the same Full HD DLP optical device. Worth experiencing.

Gaming mode enhances the contrast and sharpness more strenuously than Hi-Def, at the expense of a little

### AV INFO

#### PRODUCT:

Affordable Full HD DLP PJ combining a focus on gaming with Darbee

#### POSITION:

High-end by Optoma's gaming projector standards

#### PEERS:

BenQ W1210ST; Acer P6200S





2

colour blend finesse. This perfectly reflects the differences between video and game graphics.

An issue when using the default Gaming setting is the appearance of some weird horizontal striping noise emerging from the edges of sharply contrasted objects. Fortunately these oddities dissipate if you use the projector's menus to reduce the 'strength' of the Gaming mode to around 40 per cent.

The same artefact appears – but more aggressively – with the Full Pop option, where it joins with an OTT expansion of the contrast range to make it the one Darbee mode you should always avoid.

## Swapping games for movies

While the GT1080Darbee is designed as a projector option for gamers, it's anything but a one-trick pony. It delivers films better than some sub-£1,000 projectors, too.

Use Optoma's Reference picture preset, and don't switch off the Dynamic Black feature, and you're rewarded with some surprisingly strong black levels. The black walls of the alien 'visiting room' in *Arrival* (Blu-ray) are much less besmirched by low-contrast greyness than you may have been expecting.

What's more, provided you nudge the brightness up a couple of spots from its Reference setting default, there's healthy shadow detail. Subtle textures in the alien craft's dark walls are readily apparent, particularly with the Hi-Def Darbee feature activated.

**'The subtle colour palette of *Arrival*'s exterior scenes is conveyed with authority, naturalism and deftness'**

The subtle colour palette of *Arrival*'s exterior scenes outside the alien vessel is conveyed with authority, naturalism and deftness. But the projector also handles the primary, bold tones of *The Great Wall* (Blu-ray) with considerable aplomb.

In short, worries that the GT1080Darbee's gaming focus might prevent it from being able to deliver natural video colour tones prove unfounded.

The projector handles motion fairly well for its money too. Judder can become moderately distracting during camera pans, such as those used throughout the attack on the camp at the start of *The Revenant* (Blu-ray). Yet there's no blur over fast-moving objects, and no sign of buzzing noise over moving fleshtones.

## SPECIFICATIONS

**3D:** Yes. Active shutter (no glasses provided) **4K:** No. 1,920 x 1,080 **HDR:** No **CONNECTIONS:** 2 x HDMI inputs; 1 x powered USB; audio line output; 3D Sync transmitter port **BRIGHTNESS (CLAIMED):** 3,000 Lumens **CONTRAST (CLAIMED):** 28,000:1 **ZOOM:** Digital only **DIMENSIONS:** 315(w) x 114(h) x 224(d)mm **WEIGHT:** 2.66kg

**FEATURES:** Single-chip DLP system; built-in 16W audio; powered USB input offering Chromecast (etc) support; up to 8,000 hours claimed lamp life (depending on lamp mode); picture presets; 0.49:1 throw ratio; motion processing tech; 26dB claimed running noise in Eco mode; short-throw lens; ISF certified; Darbee processing; vertical keystone correction

## PARTNER WITH



**OPTOMA HD CAST PRO:** Hook up this dongle into the projector's HDMI input (with power coming from its USB socket) and it can be used to stream music/videos, etc, from a wireless device via DLNA, Miracast or Airplay. Priced at around £80.

Rainbow effect isn't a major concern. I saw it sometimes over strong, bright parts of a picture, but it was faint rather than a real distraction. This is a good result for a DLP PJ that's capable of getting bright enough (Optoma claims a 3,000 Lumens output) to remain watchable in lit rooms.

## Be prepared to do some lifting

The PJ does have its flaws. Most importantly, it doesn't provide any optical zoom or image shifting, meaning you have to move it forwards and backwards to get the image size you want, and use image-distorting keystone correction to get the sides of the picture straight. If you have a fixed space for your PJ in mind, then do your calculations before you buy. The lens is an ultra short-throw design, too – able to deliver a 100in image from a distance of just over a metre.

Another limitation is that the sound from the GT1080Darbee's built-in speaker is surprisingly thin and contained considering its 16W rating. And there's no 'out of the box' support for 3D; you need to add your own 3D spex at extra cost (we weren't supplied with any).

Finally, while you have to use the Dynamic Black feature to obtain the best black levels (black levels become very average without it), this feature can cause some apparent brightness jumps as it reacts to subtle shifts in an image's light levels. During Harry's chat with Ollivander near the start of the final *Harry Potter* film, as the camera cuts back and forth and then tracks towards Harry, you can clearly see a number of coarse brightness shifts as the Dynamic Black feature goes about its business.

This sequence is a pretty extreme example. With the majority of content Dynamic Black does its work relatively distraction-free, leaving you to ogle its Darbee-boosted pictures. I rate it better than our previous gaming projector hero, BenQ's W1210ST. But it's still not perfect ■

**1. The Optoma adds Darbee processing in Hi-Def, Gaming and Full Pop modes**

**2. This PJ is designed for casual setups – short-throw lens, no optical zoom**

## HCC VERDICT



**Optoma GT1080Darbee**  
→ £780 → [www.optoma.co.uk](http://www.optoma.co.uk)

**WE SAY:** Excellent video processing and fast response times really can go together after all – with surprisingly good results for gamers and movie fans alike.



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# Fat-free Yamaha still packs a punch

**Danny Phillips** puts his Atmos ambitions to one side to enjoy the traditional five-channel performance of Yamaha's trimmed-down RX-S601 receiver

**AFTER A SPELL** at fat camp on a diet of Slim-Fast shakes, Yamaha's slender RX-S601 receiver hits our test bench holding out a massive pair of trousers that don't fit anymore. This is an AVR that stands just 111mm-high, and aimed at those with either limited space, or a hatred of hulking AV separates.

Despite its slender dimensions, Yamaha claims 95W from each of the RX-S601's five channels. However, this is a single-channel, 1kHz, 6 ohm measurement; two-channel, 20Hz-20kHz, is suggested at 60W.

While it's not a full-size design, it doesn't skimp on features, with a spec sheet that includes Wi-Fi streaming, MusicCast multiroom and 4K passthrough. If you want DAB radio, add £40 for the RX-S601D.

Available in black, titanium or – unusually – white (pictured), the S601 is an eye-catching amp. The streamlined bodywork will mingle inconspicuously with wafer-thin Blu-ray decks and other boxes, while its mirrored display imparts info in glamorous fashion.

Front buttonry and sockets are kept to a minimum, but you can get hands-on with the large volume and input knobs. It lacks the luxury of Marantz's slim NR1607, but there's a pleasing heft when you pick it up.

On the back panel are six HDMI inputs and an ARC-enabled output, but only one of those inputs supports HDCP 2.2 (HDMI 6,

actually not the one labelled 'BD/DVD'). Owners of both a UHD Blu-ray deck and Sky Q/Amazon Fire/games console will have to prioritise, I'm afraid.

With plenty of optical, coaxial and analogue inputs, your other kit won't be stuck for sockets. Bluetooth and Wi-Fi are built-in (the latter requiring an antenna) or you can hook up to your network via Ethernet.

## Virtually speaking

As a five-channel amp, Dolby Atmos and DTS:X are naturally off the agenda, but a Virtual Presence Speaker mode aims to recreate the effect from your existing speakers. I wouldn't say it quite achieves that aim, but does add a sense of air to the soundstage.

CINEMA DSP 3D expands the soundfield in every direction, while Virtual Cinema DSP reckons it reproduces a 5.1 soundstage from two speakers. And if you don't have space at the back of your room for surround speakers, Virtual Cinema Front promises surround sound with all (five) speakers placed at the front of the room. As we've said before, this is a feature looking for a user.

More straightforward Dolby TrueHD and DTS-HD Master Audio decoding are joined by 17 CINEMA DSP modes for music and movies. Yamaha's patented processing whisks you off to exotic locales like the Cellar Club, The Roxy Theatre, a Hall in Munich and The Bottom Line jazz club. While not all will be your cup of tea, there's no denying the switch in soundfield characteristics is well defined.

The RX-S601 is an accomplished streamer, offering slick, simple playback from Spotify Connect, AirPlay, Bluetooth, vTuner and DLNA. It streams FLAC, AIFF



## AV INFO

**PRODUCT:**  
Slim 5-channel AVR

**POSITION:**  
Baby brother to the Avenge RX-AS710D slim model

**PEERS:**  
Marantz NR1508;  
Denon AVR-X1300W;  
Pioneer VSX-1131



and WAV up to 192kHz/24-bit, ALAC up to 96kHz/24-bit and DSD to 5.6MHz. And as part of Yamaha's MusicCast family you can play music through the receiver and other compatible speakers/soundbars using Yamaha's MusicCast app.

A second AV Controller app turns your phone into a remote for the S601. As well as controlling basic stuff like volume and sound mode selection, you can tweak the EQ parameters of each preset by dragging icons around a funky onscreen graphic. A clever-clogs Advanced version does the same job with graphs. The regular handset is, thankfully, not a clutter-fest either.

**'The receiver sites effects with pin-point precision and anchors the action with deep, thumping bass'**

In contrast to the app, using Yamaha's HDMI onscreen menus is like stepping back to a bygone age. You can stream music from the 'Net' menu but the basic colour scheme, low-rent graphics and lack of cover art make the whole experience clunky – stick with the apps if possible.

The Setup menu is similarly basic, but at least it's neatly arranged and covers all bases. You can tweak the distance, volume and EQ for each channel and play around with the DSP modes. If you prefer, Yamaha's YPAO auto calibration will do the work for you using the supplied mic. It's quick to carry out and I was happy with the results.

### Bold and exciting

The RX-S601 might have shed a few pounds in the pursuit of AV rack acceptability but its performance is anything but lightweight. With a bold, exciting tone and wide soundstage, the S601 delivers home cinema on a large scale.

Sure, it can't match Yamaha's larger designs (particularly the Aventure models) for might or impact, but if you're not moved by what the S601 has to offer you're either dead or don't care.

It's the quintessential Yamaha amp – lively and entertaining with plenty of power in the tank. Play *Guardians of the Galaxy* on Blu-ray and its sparky set-pieces are conveyed with the brand's customary zeal.

3



### SPECIFICATIONS

**DOLBY ATMOS:** No. Dolby TrueHD **DTS:X:** No. DTS-HD Master Audio **THX:** No **MULTICHANNEL INPUT:** No **MULTICHANNEL PRE-OUT:** No **MULTICHANNEL OUTPUT (CLAIMED):** 5 x 95W (into 6 ohms) **MULTIROOM:** Yes. Zone 2, plus MusicCast **AV INPUTS:** 3 x digital audio (1 x optical and 2 x coaxial); 4 x analogue audio **HDMI:** Yes. 6 x inputs; 1 x output (HDCP 2.2 on one input, and output) **COMPONENT VIDEO:** No **VIDEO UPSCALING:** No **DIMENSIONS:** 435(w) x 111(d) x 327(h)mm **WEIGHT:** 7.8kg

**FEATURES:** MusicCast multiroom support; Bluetooth; Wi-Fi; Wireless Direct; Spotify Connect; AirPlay; DLNA streaming; CINEMA DSP 3D; 17 DSP programs; Virtual Presence Speaker; Virtual Cinema DSP; Compressed Music Enhancer; YPAO sound optimisation; 192kHz/24-bit DAC; 4K passthrough; HDMI ARC; USB; Ethernet; FM/AM tuner; AV Controller app; vTuner internet radio; hi-res audio playback

### PARTNER WITH



#### Q ACOUSTICS 3000 5.1:

The smooth nature of Q Acoustics' £700 sub/sat array should go some way to balancing the Yamaha's aggressive delivery. And the relatively compact design matches the RX-S601's ethos, too.

As the Guardians brawl on Xandar, the blows are hard and snappy. Similarly the Kyn prison riot is an whirlwind of zinging gunfire, clanking metal and muscular explosions. The Yamaha communicates excitement with aplomb; involvement is nigh-on compulsory.

The receiver sites effects with pin-point precision and anchors the action with deep, thumping bass. The immersive five-channel soundstage is enhanced by CINEMA DSP 3D, which succeeds in throwing information high and wide. Dialogue comes through clearly thanks to a full-bodied midrange.

The RX-S601's innate dynamism ensures excellent audibility at low to middling volumes, and leaves plenty of headroom when you want to crank it up to 11.

While the slim RX-S601 has no trouble delivering a big, powerful sound, ironically it struggles with the smaller stuff. Treble is crisp and clear but the finer nuances of *Guardians of the Galaxy*'s DTS-HD Master Audio track slip through the net.

And when you push the volume high, there's a hint of brashness. It's not a major cause for concern but you may find it a little fatiguing.

### When space is at a premium...

Don't be fooled by its size – Yamaha's RX-S601 is Vin Diesel trapped in Danny DeVito's body. It's not the most insightful performer, but delivers power, excitement and scale in spades, a classic Yamaha listen. And with loads of features and stylish bodywork, it's worth sticking on your shortlist if AV rack space is at a premium. The provision of only a single HDCP 2.2-enabled HDMI input will have serious limitations on the kind of system you can build around it, however ■

### HCC VERDICT



#### Yamaha RX-S601

→ £450 → [uk.yamaha.com](http://uk.yamaha.com)

**WE SAY:** Yamaha's stylish AVR packs more power than expected and serves up a smorgasbord of features, but lacks the top-end insight and poise of similar slim models from Marantz.

**1. Got white speakers? Maybe you want a white AV receiver...**

**2. You can use Yamaha's remote, or its AV Controller app**

**3. Surround speaker terminals are also used for Zone 2 duties – 3.1 in your main room and stereo elsewhere?**

# Tiny twosome

**Danny Phillips** auditions

Polk's compact soundbar system, and finds it can make a bear stomp through his viewing room and bring clarity to dialogue



**SOUNDBARS ARE A** superb space-saving solution, but if your living room feels like that office in *Being John Malkovich* then finding even a metre of space might be a stretch.

Don't panic. Help is at hand in the form of the MagniFi Mini, a compact soundbar that promises big cinema sound from a 340mm-wide speaker.

Polk's MagniFi Mini's petite dimensions make it easy to plonk on a TV stand or shelf, but naturally it's better suited to smaller TVs than 60in behemoths. Bass output is beefed up by a wireless subwoofer that houses a 6.5in woofer.

There's a pleasing ruggedness about its trapezoid design, with chunky panels, rubber buttons and thick pads on the bottom that

absorb vibration. A column of LEDs indicates volume levels and selected inputs. It takes a while to learn what the different combinations mean but it all works fine.

An HDMI ARC port is a surprise (although at £350, I was hoping for some surprises), offering an alternative

single-cable connection to the optical output. A 3.5mm analogue input, Ethernet and USB charging complete the wired lineup, while on the wireless side there's Wi-Fi and Bluetooth.

The sub looks like a *Star Wars* droid with its fat feet and curved edges. It's tastefully designed, although the hollow-sounding bodywork doesn't instil confidence.

Polk has crammed plenty of drivers into the bar's modest frame: four 2.25in midrange units and two 0.5in tweeters. They're powered by a digital amp, rated at 150W.

The feature list is devoid of niceties like multiroom and DLNA streaming but with Google Cast (aka Chromecast built-in) support you can stream audio from apps like BBC iPlayer and YouTube.

Polk's Voice Adjust processing aims to improve dialogue clarity, with dedicated controls letting you set the level. Movie, Music and Sports presets are joined by a Night Effect mode that reduces bass and ramps up Voice Adjust for low-volume listening.

## If you go down to the woods...

To find out how the Polk measures up, I spun *The Revenant* on Blu-ray (DTS-HD MA) and was pleasantly surprised by its powerful sound.

Naturally I skipped straight to the bear attack and my room was filled with the beast's visceral roars and thumping footsteps.

## SPECIFICATIONS

**DRIVE UNITS:** 4 x 2.25in midrange drivers; 2 x 0.5in tweeters **AMPLIFICATION (CLAIMED):** 150W **CONNECTIONS:** HDMI ARC output; optical input; 3.5mm analogue input; Ethernet; USB charging port **DOLBY TRUEHD/DTS-HD MA:** No/No **SEPARATE SUB:** Yes. 6.5in driver **REMOTE CONTROL:** Yes **DIMENSIONS:** 340(w) x 81(h) x 109(d)mm **WEIGHT:** 1.76kg

**FEATURES:** Dolby Digital; Voice Adjust; Wi-Fi; Google Cast; Bluetooth; Movie, Music, Sports and Night modes; remote learning

As it snarls and rakes its claws down Leo's back, the effects are delivered with well-controlled ferocity. The sub skilfully conveys the bear's heft with well-balanced bass that adds plenty of punch without overpowering the soundbar.

The virtuoso battle between trappers and Native Americans is energetically performed. Arrows fizz and rifles crack, delivering a sense of excitement that you won't get through your telly.

When I demanded loudness the Polk duly obliged, hitting neighbour-goading levels with room to spare. It's also well versed in the art of dialogue reproduction, even making characters with poor enunciation sound nice and clear (we're looking at you, Tom Hardy).

Credit for this goes to Voice Adjust. It snaps speech into sharp focus without making it sound nasal, unlike many dialogue boosters. It also comes in handy when listening at low volumes after hours, allowing me to hear every word at near minimum. On the downside it has a strange effect on music playback, drawing attention to parts that should sit lower in the mix.

And although the Polk is a dynamo for its size, those dinky dimensions leave you with a narrow soundfield, which gets a tad rowdy and congested when there's a lot going on.

A sparky treble has enough air to avoid sounding closed in, but it struggles to pick out the finer details that keep you invested. It flirts with brightness too, lacking the refinement of the best soundbars.

But in the grand scheme of things these are minor complaints. On the whole MagniFi Mini is an impressive smallscale 'bar that delivers big sound from a clutter-busting box, and for many that will be reason enough to crack out the credit card ■

## AV INFO

**PRODUCT:** Compact soundbar/sub package with HDMI connection

**POSITION:** Polk's smallest soundbar, but not its most affordable

**PEERS:** Acoustic Energy Aego Sound3ar

## HCC VERDICT



**Polk MagniFi Mini**

→ £350 → [www.polkaudio.com](http://www.polkaudio.com)

**WE SAY:** An ability to deliver a powerful sound from a dinky box is impressive, as are some nifty features, but there are a few sonic limitations.



# Okay Google

There's a new Smart Assistant in town to challenge Amazon's Alexa. But while **Steve May** appreciates the birthday wishes, he'd prefer a little more sonic finesse

Additional coloured bases can be bought from £18



**ARTIFICIAL INTELLIGENCE IS** the talk of the town. Voice recognition, natural language processing and machine learning have made intelligent wireless speakers a reality.

'Hey Google, Play LBC radio.'

'OK. Here's a Spotify Playlist called Radio Punk.'

So voice control still has some way to go. But occasionally you can live with the lows.

First launched in the US, but now chasing Amazon's Alexa in the UK, Google Home promises comparable functionality, offering news updates (BBC, Sky News, Guardian, Telegraph, etc) and info dumps, plus the usual 'Easter eggs' that let you demand the answer to life, the universe and everything.

The device looks nice enough. For a speaker that aims to be futuristic, some

effort has been made to escape the usual black-box norm. It connects over (dual-band) Wi-Fi, so there are no physical connections. There's no Bluetooth support either.

During initial setup it switches to a temp Wi-Fi Direct connection, which allows you to update the device for your Wi-Fi network. As part of this routine, you can assign a room name, link a Spotify or Google Music account, and partner with a local Chromecast streamer.

The speaker entertains with an Android TV-style lightshow. You can get physical if you want: tap its top and you'll pause your audio, tap again and it resumes. Volume can be manually controlled with a swipe.

## Baby talk

Unlike Alexa, the device talks with an American accent. And, unlike Alexa, has no clue how to pronounce where I live. The wake word is 'Okay, Google'. The more I say it, the more I sound like a gurgling baby. 'Hey Google' also works, so I adopt that.

As an audio device, Google Home sounds poor. While Amazon's taller Echo makes for

## SPECIFICATIONS

**CONNECTIONS:** 1 x microUSB port (for service only) **DRIVERS:** 1 x 2in driver and 2 x 2in passive radiators **AMPLIFICATION (CLAIMED):** N/A **AUDIO FORMAT SUPPORT:** AAC, MP3, WAV, Orbis, FLAC, Opus **DIMENSIONS:** 96.4(diameter) x 142.8(height) mm **WEIGHT:** 477g

**FEATURES:** Dual-band Wi-Fi; Chromecast; far-field voice recognition; smart integration with connected devices, incl. Nest, Philips Hue; coloured base options

a passable wireless speaker, Google Home is low-fi in the extreme. And, unlike the Echo Dot which offers Bluetooth/3.5mm outputs to partner with third-party speakers, Google Home is inflexible.

The dumpy speaker actually has a decent bottom end, which gives tunes some weight. M.O.P.'s hip-hop classic *Ante Up* drops deep, but the midrange is thin, and goes from coarse to brittle. The result is not anything you might actually choose to groove to.

Far-field voice recognition works well, but interaction can be a little clunky. Google likes to keep on first name terms, but you may tire of the repeatedly over-familiar 'Sure!' It did sing me 'Happy Birthday', though, something Alexa singularly failed to do, so Brownie points where they're due.

As part of a larger Google ecosystem, Google Home has some tricks up its sleeve. Use a Chrome browser on your device and audio from any content can be cast to the speaker. This makes the gadget useful if you don't have a dedicated PC desktop sound system. You can also share access using a Guest mode with other Android phone users.

Smart interactivity includes support for Nest thermostats, Philips Hue lighting and Samsung's Smart Things IoT family. You can't string commands together. Unlike Alexa, there are no Skills to improve usability.

While you might expect Google Home to work with Android TVs, it doesn't – at least not for me. A Sony XD9305 comes up with a 'Voice control not supported' signpost in the Google Home app. Firmware updates will no doubt change things over time.

This speaker is clearly a work in progress. It's potentially powerful, but at the moment comes across as more eager than Smart. It lacks the polish of Amazon's Alexa platform, and as a wireless speaker it's unimpressive. But these are early days, I suppose ■

## AV INFO

**PRODUCT:** Smart wireless music speaker

**POSITION:** Google's debut Smart Assistant product

**PEERS:** Amazon Echo/Echo Dot

## HCC VERDICT



### Google Home

→ £130 → [madeby.google.com](http://madeby.google.com)

**WE SAY:** Google Home doesn't come close to the Amazon Echo as a wireless speaker, and the platform isn't half as smart as it thinks it is.



# Small big idea

Yamaha's ambitions for its MusicCast ecosystem apparently know no bounds. The WX-AD10, discovers **Ed Selley**, opens up its multiroom service to all manner of devices

**FREED FROM THE** need to be wired in place and making use of network audio principles, multiroom systems have finally started to gain the traction that companies have long been hoping for. One significant issue remains, however: some people starting from scratch might be happy to buy a complete house-worth of new stuff, but most of us will have legacy equipment that won't play nice with the new system.

Yamaha has decided that the best way to solve this is to create what it literally describes as a 'MusicCast adaptor.' The WX-AD10 is a compact grey box that will connect to a network via wired or wireless hookup and allows for the functionality of MusicCast to be made available to anything with an analogue line input. This means

24-bit/192kHz network audio streaming, support for Spotify, Qobuz and Deezer (Tidal is due) and internet radio. Additionally, any MusicCast device on the network that is a MusicCast 'hub' can send material it has access to locally onto the AD10. Not enough? Okay, you

get AirPlay and aptX Bluetooth too – although, sadly, there is no digital output.

All this is wrapped in a simple and, it must be said, fairly uninspiring chassis. Nonetheless, the WX-AD10 is sufficiently small that it could be easily hidden away out of sight.

Yamaha has also decided to use a USB-based power supply. This means that you can use the USB connection on older AV receivers designed to power their Bluetooth adapters to run this, which is a nice touch.

The MusicCast app (iOS, Android) remains an excellent example of the genre. It's flexible, easy to configure and can handle multiple different devices in a wholly self-explanatory way. Setting up this Yamaha gizmo is straightforward and should take less than five minutes.

## Out with the old...

Once installed and 'net-connected, the WX-AD10 can be named and assigned as a room in your MusicCast system. It's worth noting here that even if you have no other MusicCast devices, the Yamaha still makes a fair degree of sense, ushering in new hi-res audio performance tricks to older equipment.

In use, the onboard Burr-Brown DAC and Yamaha's silicon manages to put in a performance that sounds rich, natural and largely forgiving even when the material you play isn't perfectly recorded. Revisiting the

## SPECIFICATIONS

**CONNECTIONS:** Phono stereo output; 3.5mm output; Bluetooth input, AirPlay input; Ethernet; Wi-Fi; USB charge

**AUDIO FORMAT SUPPORT:** MP3, M4A, WMA, AAC (48kHz/24-bit); AIFF, FLAC, WAV (192kHz/24-bit); ALAC (96kHz/24-bit)

**REMOTE CONTROL:** No. Control via MusicCast smartphone/tablet app

**DIMENSIONS:** 130(w) x 45(h) x 106(d)mm

**WEIGHT:** 226g

**FEATURES:** MusicCast ecosystem integration; Spotify, Qobuz, Deezer streaming (other services due); Burr-Brown DAC

Yamaha's WX-AD10 will turn any AVR with phono/3.5mm input into a MusicCast client

magnificent Dust Brothers score for *Fight Club*, the WX-AD10 does a keen job of relaying the massive levels of bass energy in the piece without suffering too severely from the slightly excessive treble that the album can demonstrate. There is a convincing sense of soundstage and depth and it manages to avoid feeling processed or unnatural.

This also means that the Yamaha is usefully forgiving of compressed material. Spotify manages to sound perfectly reasonable used as a source. Red Hot Chili Peppers' *Californication* comes through neither thin nor harsh despite the extremely compressed mix. There's a limit to how lo-fi you'll want to go, though. Very poor-quality internet radio stations will still sound like very poor-quality internet radio stations. If, however, you can stream hi-res material, the WX-AD10 captures the benefits. A 24-bit/96kHz download of Nick Drake's *Five Leaves Left* is fantastically natural-sounding – a reminder that the performance from affordable digital gear has become seriously impressive.

## A welcome dose of smart

If you already have MusicCast components in your household, the WX-AD10 will ensure that additional equipment can be brought into the system for what is a reasonable price. Alternatively, you might simply choose to add this to a legacy AV receiver and expand your music horizons. Overall, this is a well specified, compact device that should add a welcome dose of smart to almost anything with a phono input. Maybe next time it could come in colours other than grey ■

## AV INFO

**PRODUCT:** Phono/3.5mm network/Bluetooth adapter

**POSITION:** Entry-level MusicCast adapter system

**PEERS:** Sonos Bridge; Mosaic MPL

## HCC VERDICT

★★★★★

Yamaha WX-AD10

→ £150 → [uk.yamaha.com](http://uk.yamaha.com)

**WE SAY:** It's not pretty, but the WX-AD10 effectively boosts the 'reach' of MusicCast and adds useful features to dumb audio gear.



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# WIN!

# Oppo's premium PM-2 headphones

**THIS ISSUE WE'RE** giving away a pair of Oppo PM-2 headphones, worth £700. These audiophile cans deliver a scintillating sonic experience, matched to comfort and smart design.

## State-of-the-art drivers

The PM-2s are a member of Oppo's Planar Magnetic headphone range, distilling the key acoustic and industrial design features of the reference PM-1s into a more affordable package. This means the same seven-layer planar magnetic driver diaphragms used on the Oppo flagship are employed here, with push-pull neodymium magnet technology. Driver pairs are matched

during manufacture to ensure an accurate stereo image.

The resulting sound performance is exemplary – the PM-2s sounds natural and unforced, without any sign of bloated bass or over-emphasised treble. Whatever source you feed them, be it your hi-res music library or a Blu-ray soundtrack, you're rewarded with a classically neutral, accurate and detail-packed soundstage that's ripe for lengthy listening sessions.

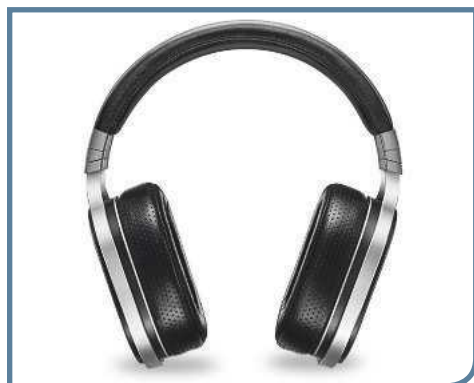
Styling is cool and classy, with the padded open-back earcups sitting snugly but not weighing too heavily – the PM-2s tip the scales at just 385g. Earcups and headband are adjustable to offer a perfect fit; the

synthetic leather pads are removable, should you want to adorn the headphones with posher lambskin variants available as an optional extra.

The headphones are supplied with both a 6.35mm cable for use with your AVR or headphone amp, plus a 3.5mm iteration for connection to portable devices. Aiding their out-of-the-house use is a bundled carry-case.

And the PM-2s are designed to last, too, with Oppo conducting extensive mechanical and environmental stress tests before letting them out in the wild.

To be in with a chance of winning a pair of Oppo PM-2s, answer the question below correctly – and good luck! ■



**To have a chance of winning Oppo's PM-2s answer the following film-related brain-teaser:**

**Q: In the X-Men film series, Magneto has been played by both Ian McKellen and which other actor?**

**A) MICHAEL FASSBENDER B) JAMES MCAVOY C) PATRICK STEWART**

**HOW TO ENTER:** Simply email your answer (either A, B or C) to [competitions@homecinemachoice.com](mailto:competitions@homecinemachoice.com) with the subject line 'Oppo PM-2'. You must include your name, address and contact telephone number.

**THE CLOSING DATE** for this competition is July 20, 2017. Please read the terms and conditions (opposite) before sending in your entry.

## Competition rules

1. The first entry drawn at random will win the prize.
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3. Entrants from the UK only.
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6. No alternatives, cash or otherwise, will be offered to the winner as prizes.
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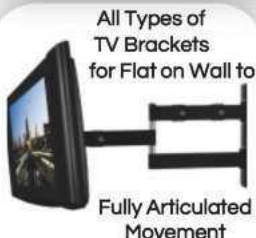
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# Digital Copy

Filmmakers have found beauty in sunsets since the birth of cinema. Yet **Mark Craven** is finding nothing but irritation as he battles with rogue rays in his viewing room

**HOME BUYERS ARE** always on the look out for a south-facing garden, apparently. Why this is, I'm not entirely sure – doesn't it matter which way you yourself are facing when standing on your lawn? Anyway, I may know next to nothing about gardening, but I do know that of equal importance to getting your rhododendrons enough time in the sun is to not buy a house with a west-facing living room. And I know this because I bought one.

This time of year is obviously the worst. The long Summer evenings should be a thing to celebrate, but all that extra sunshine plays havoc with my movie-watching, to the point where **I'm readily considering a house-swap with someone in the southern hemisphere.**

In my household, movie night usually always begins at 8pm. Not too early, but not so late that you start yawning mid-way through a 150-minute epic. For much of the year it's fine. Dark outside, blinds drawn, and some small lamps switched on for very low-level lighting. (Not The Big Light. The Big Light only ever gets switched on for Christmas morning, for some reason).

Come mid-May, though, and those blinds become not just a way of keeping heat in and nosey neighbours out. They're also necessary to stop the setting sun ripping through the tissue of my retinas. For lengthy periods, while the rest of the country is marvelling at a classic David Lean-esque sunset, I'm cursing the fact that I bought a house without taking a compass. I've developed a hatred for midsummer, and realise more than ever how light management is vital to a home cinema experience.

## Let there not be light, please

Go down to your multiplex and the darkness is practically all-enveloping. A few floor-level LEDs

may guide to your seat, and green boxes will show off emergency exits, but most light will be coming from the bus-sized projector screen in front of you. The darkness is comforting, the experience immersive.

A custom-made home cinema room will go for a similar feel. Mood lighting will be an option, but daylight will be given short thrift. Windows may not even feature.

Now, I'm not allowed to brick up my west-facing full-width window, because while this is a room that requires managed lighting in the evening, it's also a room where other people like to sit and chat and read and eat and get on with lives during the day. And they want to do this with natural lighting. Otherwise it would be like being in the hold of ship.

The solution, obviously, is ruthlessly efficient black-out blinds. This is what I thought I had bought – at a considerable cost that put my Blu-ray buying habit on hold – after the first Summer weeks in my house revealed that curtains just weren't going to cut it. Yet even when they're fully down, they're not smart enough to stop a blazing, burning ball of plasma 93 million miles away from framing them with a fiery orange glow (quite a scene-setter with sci-fi flick *Sunshine* (pictured), admittedly), or a slender ray of sunshine sneaking through a gap at the edge and zipping across the room like a Predator's laser. And sometimes these irritating lightshows play out reflected on the screen of my 4K TV. Which becomes an issue when you're trying to enjoy the dialled-down murk of Denis Villeneuve's *Arrival*.

So I'm about to reconfigure the room, switching screen and viewing position to counter these niggles. Hopefully that'll work, but if this next column begins with 'I've moved to Auckland', you know why... ■

*Is your viewing room capable of a total black-out?  
Let us know: email letters@homecinemachoice.com*

**Mark Craven's** movie-watching accessory-pack now includes Factor 50 suncream as well as a pouch of Maltesers





# Film Fanatic

The closure of another video-on-demand service leaves **Anton van Beek** feeling smug about his disc collection. But the world of physical media still has problems, too

**FAREWELL BBC STORE.** Yes, just 18 months after it first opened its virtual doors, the BBC is closing its transactional video-on-demand service. Created to allow users to buy digital copies (as individual episodes or full boxsets) of the Beeb's current TV hits like *Sherlock* and *Doctor Who*, as well as offering a treasure trove of archival treats like rare Dennis Potter plays and, erm, old episodes of *Doctor Who*, the BBC Store will be pulling down the shutters for good this November.

Until then, customers will at least be able to watch content they've bought from the service. But as of November 1 everything purchased will disappear into the digital ether, never to be seen again. Sort of.

The fact that the BBC Store struggled to compete with more established VOD or streaming services is hardly surprising when the majority of the Beeb's most popular shows are also available on Netflix, iTunes and Amazon. This situation only left some of the rare archival material as the BBC Store's USP – and as interesting as much of this may have been for nostalgia buffs and fans of old TV shows, it was never going to be able to sustain the service by itself.

Thankfully, customers aren't being left completely in the lurch by the closure and the BBC is offering a choice of either a full refund for all purchases, or Amazon Video vouchers for the value of the BBC Store purchase plus an additional 10 per cent.

Of course, the entire situation just goes to show what *HCC* has been saying for years: **physical media is still the best method of owning content to watch on your home cinema.** Okay, so it may be more expensive and obviously requires more storage space, but at the same time, nobody is going to suddenly turn up on your doorstep unannounced to take away

all of your DVDs, Blu-rays and Ultra HD platters.

Well, not unless you're in a spot of bother with the bailiffs, but that's a very different matter altogether.

While the Amazon voucher refund should make it possible for former BBC Store customers to replace most of the titles with new digital copies, they're now at the mercy of whatever licensing deals Amazon has struck with the BBC. Unlikely as it may be, there's always a chance that the two may have a falling out in the future and the Beeb could pull all of its content from the service, leaving those customers with nothing once more.

Meanwhile, I'll still be watching every extant classic episode of *Doctor Who* on DVD. Not to mention all the supplementary material that's been produced for those discs over the years.

## Not fast, just furious

All is not hunky-dory in the world of shiny discs here in the UK, either. Every day my inbox fills up with press releases for upcoming disc releases and offers of interviews to support them. One that really caught my eye this month was a heads-up for the UK home entertainment release of *Fast & Furious 8*.

However, my initial excitement about finally catching the film was dashed by the mention of an October 16 release date. As the movie is coming to DVD, Blu-ray and Dolby Vision-enabled 4K Blu-ray in the US on July 11 this came as a bit of a shock. And it's despite the fact that the film opened in cinemas in the UK two days prior to the US.

Not only is the delay infuriating, it's also going to hit Universal Pictures UK in the wallet. Like most other *HCC* readers, I suspect, I'll be importing the US release instead of waiting for the UK platter ■

*Did you use the BBC Store? What do you feel about its closure? Let us know: email [letters@homecinemachoice.com](mailto:letters@homecinemachoice.com)*

**Anton van Beek** dreams of one day owning a complete set of every *Fast & Furious* Blu-ray housed in a life-size replica of Vin Diesel's shiny head





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# In The Mix

Two major Hollywood blockbusters have had black-and-white re-grades. **Jon Thompson** likes one, but not the other – and it ends up making him angry about something else entirely...

**I AM CONFUSED!** And it's the fault of black-and-white versions of colour movies.

This first came to light with *Mad Max: Fury Road*. I heard about the 'Black and Chrome' edition from a lunch with director George Miller. Well, I was at lunch and he was on the next table, so I table-crashed. Would have been rude not to.

What appears to have happened is that a journalist had visited Miller while the film was being graded in post-production and had seen a monitor that was set up for viewing peak luminance in black-and-white. This shows a high-contrast image so you can see if there is detail in the highlights. Miller joked they were working on a black-and-white version of the film...

Of course, he had always mused about his *Mad Max* universe being in monochrome. Earlier this year, before ...*Fury Road* hit cinemas sans colour for special screenings, the director said he was thinking about it when 1981's *The Road Warrior* was released: 'Way back, when the score for *Mad Max 2* was being recorded, the orchestra would play to a high-contrast black-and-white slash dupe. This was a sacrificial print and a lot cheaper than a coloured version to create. I was struck by how much more 'iconic' the images felt... Ever since I wanted to see a *Mad Max* movie in black-and-white.'

Now we have *Logan*, the conclusion of Fox's *Wolverine* series. Surely inspired by the success of *Mad Max*'s 'Black and Chrome' edition, *Logan* boasts a 'Noir' version. Yes, it's catching!

This re-grade I really liked. It adds something to the film that was lost, I think, in its colour version. *Mad Max*'s colour grade was so vivid and colours really popped – it truly looked like another world. The 'Black and Chrome' edition loses that impact. The opposite was true of *Logan*. In colour it just

looked drab and grubby, and to me, lacked any real bite. Yet the 'Noir' iteration has a luminous quality that gives the world *Logan* inhabits real depth.

And director James Mangold, during a Q&A that accompanied its theatrical debut, struck a chord with me about black-and-white. 'People are looking for things that connect to the past, things that look different, things that are new, but also old again. I think for a long time studios have had an assumption that you guys need bright colours at all times to stay amused and loud sounds to stay enthused. I don't think that's true. I think audiences are getting more sophisticated and more interested in seeing creativity explored in all sorts of different ways.' Hear, hear.

The 'Noir' version of *Logan* has worked as it has given the film a second wind in US cinemas. **It's a shame, then, that the lazy UK cinema market has given it a swerve.** This merely highlights that since the demise of the legendary film distributor Tartan Films, the UK has grown slothful in both cinema and home entertainment arenas, with the exception of a few small proactive indie labels who are doing a great job with Blu-ray. On the whole, UK majors/studios are sloppy compared to German, Spanish, French, Czech, etc, distributors when it comes to variety and quality of releases.

Tartan was literally a punch in the face to UK cinemas. But I wonder who is going to carry that flag and release the next *Man Bites Dog* or *Old Boy* or any of the other cool indie films of the '90s and '00s that we don't see anymore.

These black-and-white versions of Hollywood blockbusters have got me thinking about the independent UK cinema market and it's state compared to 15 years ago. See why I'm confused? ■

*Are you interested in black-and-white versions of colour films? Let us know: email letters@homecinemachoice.com*

When he's not in his screening room, **Jon Thompson** tweets about Hollywood gossip, movie-making and digital mastering at @johnnyfocal







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**Danny Phillips, Home Cinema Choice, June 2016**



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# Behind the scenes

What's in a format name? To most consumers, maybe nothing, but **Barry Fox** finds that when it comes to HDR, someone is making a curious move to take ownership of an 'open standard'

**HAVE YOU EVER** wondered why no one talks or writes about 'lifestyle' audio, unless it's made by Bose? In the 1990s Bose succeeded in registering the word 'lifestyle' as a trademark for 'sound reproduction apparatus and instruments; loudspeakers'. Since then anyone using the word for audio can expect a phone call...

Trademarks give strong protection – which is why no one except Coca Cola sells Coke. And they last for as long as their owners pay renewal fees. **The first UK trademark, Bass for Beer, was registered in 1876 and is still in force.**

Now something similar is on the cards for the word HDR10, which is the open high dynamic range system used for TV sets, game consoles and Blu-ray. In March, Samsung's HQ in Korea applied to register the plain word HDR10. At the same time Samsung also applied for the word HDR10Plus.

Soon after the application was filed, and with distant memories of being told by magazine editors not to talk about 'lifestyle audio', I started asking manufacturers and trade bodies what they thought about restrictions on the word HDR10.

The answers I got – more accurately non-answers – were a big surprise.

Richard Lindsay-Davies, Chief Executive of DTG, the UK's Digital Television Group, said such matters were 'usually managed by individual manufacturers and/or Digital Europe,' the body in Brussels which represents the digital technology industry in Europe.

John Higgins, Director General of Digital Europe, first said thanks 'for the alert' and then referred request for comment to his Communications and Marketing Director, who said 'we have no comment on this subject.'

A spokeswoman for LG, traditionally Samsung's main rival, first said LG doesn't comment on rumours

or speculation. When pointed to official documents which detail Samsung's formal application (which you can locate online via the European Union Intellectual Property Office website), the spokeswoman said: 'LG does not wish to comment.'

Ironically LG had earlier issued a press release which boasted that LG's 'entire 2017 lineup of premium TVs support the full palette of HDR formats ...including... HDR10.' This is the very word for which Samsung wants exclusive rights.

Further enquiries to Sony, Panasonic, Philips and the BBC's R&D department, which has been actively involved in HDR development, drew blanks.

Even Samsung's own management in Europe seems to have been kept in the dark. Speaking at the IFA preview conference, Samsung Europe VP Michael Zoller appeared genuinely surprised when I asked whether Samsung would be pressing ahead with its applications to register HDR10 and HDR10Plus.

The latest news is that in the US, Samsung has abandoned the application to register the word HDR10 (because, it's believed, the Consumer Technology Association took up cudgels) but is pressing ahead with a claim for HDR10Plus. In Europe, as of the time of writing, both words are still proposed and no-one has filed any opposition.

When I raised this issue at a recent DTG Summit, the question was passed round a panel of industry experts like a hot potato, with all concerned clearly confused. HDR10 is, after all, an open standard.

As happened with Bose and 'lifestyle', the situation will become a whole lot clearer if and when Samsung succeeds in claiming sole rights to HDR10. But by then it will be too late for anyone to moan about it... ■

*Are HDR format names risking consumer confusion?  
Let us know: email [letters@homecinemachoice.com](mailto:letters@homecinemachoice.com)*

**Barry Fox** spends his days digging deep into patent applications and trademark law, because he knows you don't want to do it yourself





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# Feedback

Got an axe to grind? Need to comment on current technology? Want to share your knowledge with our readers? **Team HCC** is here to help

## New TV and speakers needed!

I've found your reviews very helpful and they will certainly aid me in buying my new home cinema setup but it is quite a minefield out there.

I want to buy a new 65in 4K HDR TV so I can watch Ultra HD Blu-ray films and play games on my PlayStation 4 Pro. Should I go for a TV that has Dolby Vision like the new 65A1 Sony OLED or for a TV like the Samsung QE65Q9F that instead supports HDR 10?

Secondly, I want my sound to be more immersive. Presently I have a seven-year-old KEF 5.1 surround setup. I'm not sure whether to go 5.4, 7.1 or Dolby Atmos. This would be set up in my loft which has a sloping ceiling at the back and measures 15ft in length by 11ft in width. I intend to pay around £1,500 for this. I would also need a compatible amp to replace my existing seven-year-old one. I am willing to splash out about £1,500 for this as well. The only thing I am certain about to go alongside all this is to purchase the new Oppo Ultra HD Blu-ray deck, unless you think otherwise.

Any advice you can give would be very much appreciated.

John Wing

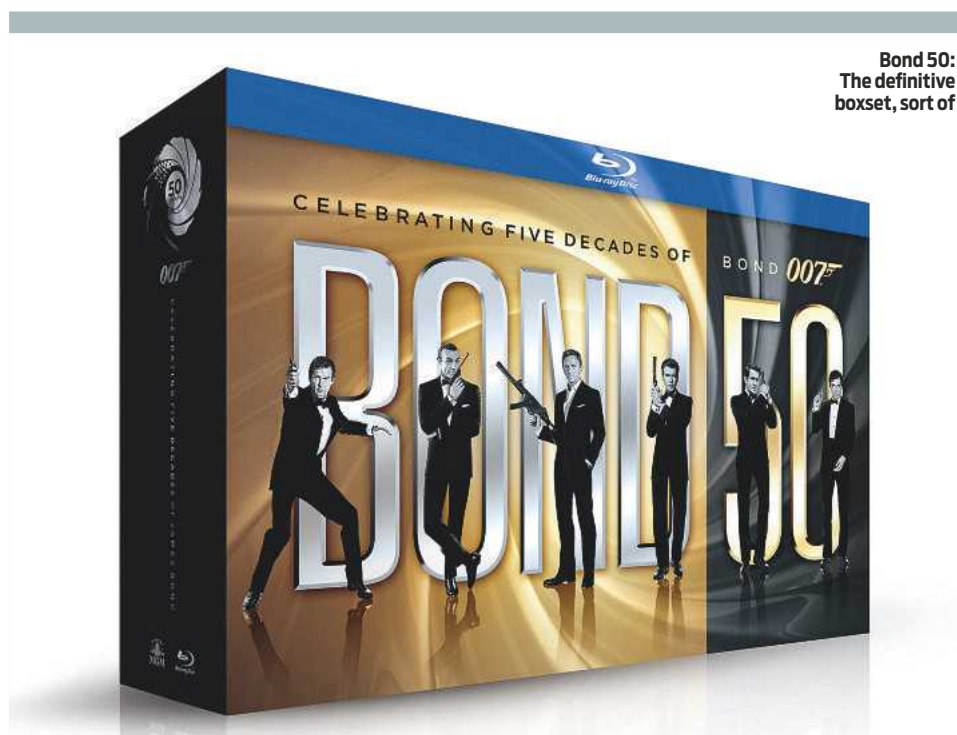


Samsung's Q9F: an HDR star, but not Dolby Vision-enabled

**Mark Craven replies:** If I had a pound for every 'should I buy Dolby Vision' question, etc, etc...

Dolby Vision remains an unknown entity. Myself and colleagues have had impressive demos, and been able to compare DV and HDR 10 streams, but when it comes to 4K disc there's no way of seeing into the future to

know whether it will gain solid studio support or be limited to a handful of random titles. At the time of writing, Sony Pictures (*Resident Evil: Vendetta*), Universal (*Despicable Me*, *Despicable Me 2*, *Fast & Furious 8*) and Lionsgate (*Power Rangers*) had confirmed Dolby Vision disc releases.



Bond 50: The definitive boxset, sort of

## Potty about Potter

Like Anton van Beek (HCC #273) I've often looked out for special edition DVD and Blu-ray boxsets. I'm happy with unusual designs and odd packaging, and have even gone for boxsets released for series that simply haven't finished yet. The *Bond 50* package was too good to turn down, even knowing that more Bond movies were coming in the future.

My question is: will there be a Harry Potter 4K boxset? I've seen some of the films have been released on Ultra HD Blu-ray, but not all of them. Why?

Ross Benton

**Anton van Beek replies:** For some reason, Warner has decided to release that last four films in the Harry Potter franchise on 4K Blu-ray first, with the first four (...*The Philosopher's Stone* to ...*Goblet of Fire*) promised later this year. There's no word (yet) on an all-encompassing boxset.



Dolby Vision format support can be a buying factor, but perhaps not an overriding one. In your situation, you might want to consider whether you prefer the overall image quality of Sony's A1 OLED, or Samsung's significantly brighter LED-lit Q9F.

Of course, if you have your heart set on an Oppo 4K player, then that will be getting a Dolby Vision firmware update (according to the brand) – so, considering pricing is the same for Sony's A1, LG's Dolby Vision-enabled E7 and Samsung's QE65Q9F, you might think it's best to opt for a screen that can work with all 4K Blu-rays currently released or announced. Not to mention Dolby Vision streams from Netflix and Amazon.

Note that the Sony and LG sets naturally also support HDR 10.

As for your speaker conundrum, does the sloping ceiling hinder the placement of surround back speakers? I'd definitely suggest stepping up from 5.1 to 7.1, as this would be easily achieved with your existing KEF speakers. Of course, adding two (7.1.2) or four (7.1.4) Atmos speakers would be even more immersive, and still perhaps within your £1,500 budget. Definitely go for Atmos/DTS:X if you can, as the formats are gaining traction rapidly with software, particularly 4K discs.

If by 5.4 you do actually mean just adding an extra three subwoofers, that might be more LFE than your room can handle, not to mention difficult to calibrate properly.

In an ideal world you'd go for 7.1.4, but do check Dolby speaker placement guidelines to see if you can site upfiring speakers (or in-ceiling models) in the correct positions. And this also means you'll need an 11-channel AVR – which, at your budget, pretty much limits you to Denon's AVR-X6300H.

An easier upgrade might be to add rear back speakers and a pair of Atmos heights. This way you have more (nine-channel) AVR options. Get one that also processes an 11-channel Atmos/DTS:X soundfield and you just need to add extra power in the future should you want to add two more speakers.

## Home cinema beats going out

After nearly five years of owning my own home cinema and nearly three of absence, my wife and I, with friends, made our way to our local top-flight cinema house in Milton Keynes, which opened two years ago. We went to see *Alien: Covenant* with high expectations – the latest film shown with Dolby Atmos, digital bigscreen technology, all wrapped up in a full cinema experience.

On leaving what we experienced was something between shock and disbelief. Let me ask this one question: has cinema technology in the past few years fallen behind the domestic market? Because on my side of the fence we all agreed the picture was at best

## ★ Star Letter...

### Streaming? Stream on...

You asked if there's anyone giving the likes of Netflix or Amazon the cold shoulder. Well, I am one of those.

I have no interest in streaming. I have always been a die-hard physical disc collector. I started when places like HMV had one narrow rack of shelves with DVDs on it. I used to get my DVDs from [dvdboxoffice.com](http://dvdboxoffice.com) (who, sadly, are no longer trading) as it was cheaper than going to the supermarket, or even HMV.

If there's a film I want to watch, then I would rather own the disc than stream it. At least then I have something tangible to touch in my hands, and I can always go back and watch it whenever I want.

I don't know whether titles online are removed as new ones are added, but at least I know that the films that I've collected are available 24/7.

As I have pointed out before, one of the concerns with 'owning' films on the internet is that, should the company you have purchased from go out of business, you lose all your collection in one swift go. Also, the named person is the only person who actually 'owns' the titles in your collections. Therefore, if that named person should

**Steve's disc collection. It's his. He owns it**



okay and at worst out of focus, not even close in quality to my 120in screen.

The sound lacked real depth and feel, in an environment one could only describe as a 'cold, black coffin', and incorporating bright torches from mobile phones.

Where's the high-tech 'once in a lifetime experience' we are promised when we first walk into a brightly-lit lobby offering popcorn and watered-down drinks at mortgage-breaking prices?

In fact, here's a cost breakdown: four adult tickets at £45 for standard seats (it would be

unfortunately die, there is no legacy for your spouse or offspring.

To sum up, there is definitely something about picking a BD in the store or receiving it through the post that can never be beaten by streaming. After all, when you stream it, you 'virtually' own it. If you have the disc, you do really own it!

I have included a picture of my collection of Blu-rays, numbering just shy of 500. I also have an extensive collection of DVDs, (530-ish) that are now stored in the loft. I have created my own Access database to keep track of my collections, which I use to aid buying so I do not duplicate discs, but can also buy BDs of DVDs I want to replace.

So in short, yes, there are people who give streaming the cold shoulder. And I am proud to be one of those people!

Steve Old

**Anton van Beek replies:** As you'll have seen from the column I wrote for this issue (p76) I couldn't agree more. When it comes to owning content, there just isn't anything that can beat physical media. That said, the sheer amount of episodic content I wish to watch (but not necessarily own) on Netflix means that I'm fighting an urge to subscribe to that streaming service....

Thanks too for sending in the photo of your Blu-ray collection. We always love a sneak peek at someone's disc library!

Star letter-writer Steve grabs the explosive action-fest *Resident Evil: The Final Chapter* on 4K Ultra HD Blu-ray. The sixth and final instalment in the record-breaking global franchise phenomenon, *Resident Evil: The Final Chapter* is available now to own on Digital Download, DVD, Blu-ray, 3D Blu-ray and 4K Ultra HD Blu-ray, courtesy of Sony Pictures Home Entertainment.



£72 for Gallery seats), plus drinks and snacks for £27. Total price: £72.

When we have a movie night at home shown in a 'real cinema environment' – Full HD; 7.2-channel sound; comfortable, classic, old-style cinema seats; freshly made popcorn; limitless drink (including wine) – the overall costs are no more than a fiver.

I think on this evidence these large corporate cinemas have a lot to learn from the home cinema market that's fast becoming more popular, and overtaking the technology of large cinemas.

My advice is keep buying *HCC* for the latest tech news, and don't waste your money on overpriced, low-tech, cold and unfriendly large cinemas. Spend it on improving your own! *Steve Clark*

**Mark Craven replies:** I doubt there are any of us who haven't had a moan about a commercial cinema experience – I've suffered the whole gamut, from films shown in the wrong aspect ratio to theatres that are so cold I've kept gloves, hat and scarf on. My colleague Steve May has his own unique experience to report about this issue (p122).

While I welcome your optimism, it's not quite true that the 'home cinema market' is becoming more popular than its commercial rival! For many a trip to the cinema is a regular past-time, and their domestic experience is limited to just a TV. And they don't have a stonking AV setup at home as a point of comparison.

I feel some defence is necessary of our country's commercial cinemas, as there are numerous excellent establishments that go out of their way to make the cost of that ticket and popcorn bucket worthwhile. But, like everything, quality varies. And while the growth of streaming and home media hasn't exactly led to the death of cinema attendance that some people assume, it appears to have



4K projectors, like BenQ's X12000, command a high price

stopped it growing, meaning cinemas are facing pressure as overhead costs increase. This no doubt leads to lack of investment, staff training, etc, and the need to try and up-sell a customer a bag of mints.

The best you can do is speak with your feet. Bad cinema experience? Go elsewhere. Or, in your case, stay at home and enjoy the wine.

### Should I upgrade my PJ?

I was hoping to upgrade my Epson EH-TW9100 projector which is now nearly five

years old. But Jon Thompson (*HCC* #273) wrote that projectors have not kept pace with other technical improvements so I'm wondering if maybe I should I wait longer.

For starters, 4K UHD looks like it's here to stay but 4K projectors still demand a big price premium over 2K models. Then, what about the benefit of HDR? I wouldn't expect 1,000 nits on a projector (since that is measured per square meter) but would an HDR model be bright enough to deliver an improved image of 30-40fL? And what about HDR formats? >

## WIN! Great Blu-rays up for grabs...

Just email your answer to [Competitions@homecinemachoice.com](mailto:Competitions@homecinemachoice.com) to be in with a chance to win



### The Amityville Horror

One of the most famous horror films of all time, *The Amityville Horror*, finally makes its UK Blu-ray debut on June 26 as a limited edition

Steelbook. To celebrate the release we've teamed up with Second Sight to give away three Blu-ray Steelbooks!

#### Question:

Which actress plays Kathy Lutz in the 1979 adaptation of *The Amityville Horror*?

#### Answer:

- A) Margot Kidder B) Margot Robbie  
C) Margot Bryant

Email your answer with 'Amityville Horror' as the subject heading – and don't forget to include your postal address!



### The Autopsy of Jane Doe

Two morticians must endure a night of white-knuckle horror in this brilliantly macabre thriller released to buy on Digital Download on June 19, followed by

DVD and Blu-ray on June 26. Thanks to Lionsgate Home Entertainment we've got five *The Autopsy of Jane Doe* Blu-rays up for grabs!

#### Question:

Norwegian director André Øvredal previously helmed which of the following films?

#### Answer:

- A) *Trollhunter* B) *Dead Snow*  
C) *Manhunt*

Email your answer with 'Autopsy of Jane Doe' as the subject heading – and don't forget to include your postal address!



### Elle

Controversial filmmaker Paul Verhoeven is back with a mesmerising new thriller. *Elle* is available on Digital Download on July 3, followed by Blu-ray/DVD on July 10, courtesy of Lionsgate Home Entertainment. To be in with a chance of winning one of five *Elle* Blu-rays, simply answer the following...

#### Question:

Which of the following sci-fi blockbusters was *not* directed by Paul Verhoeven?

#### Answer:

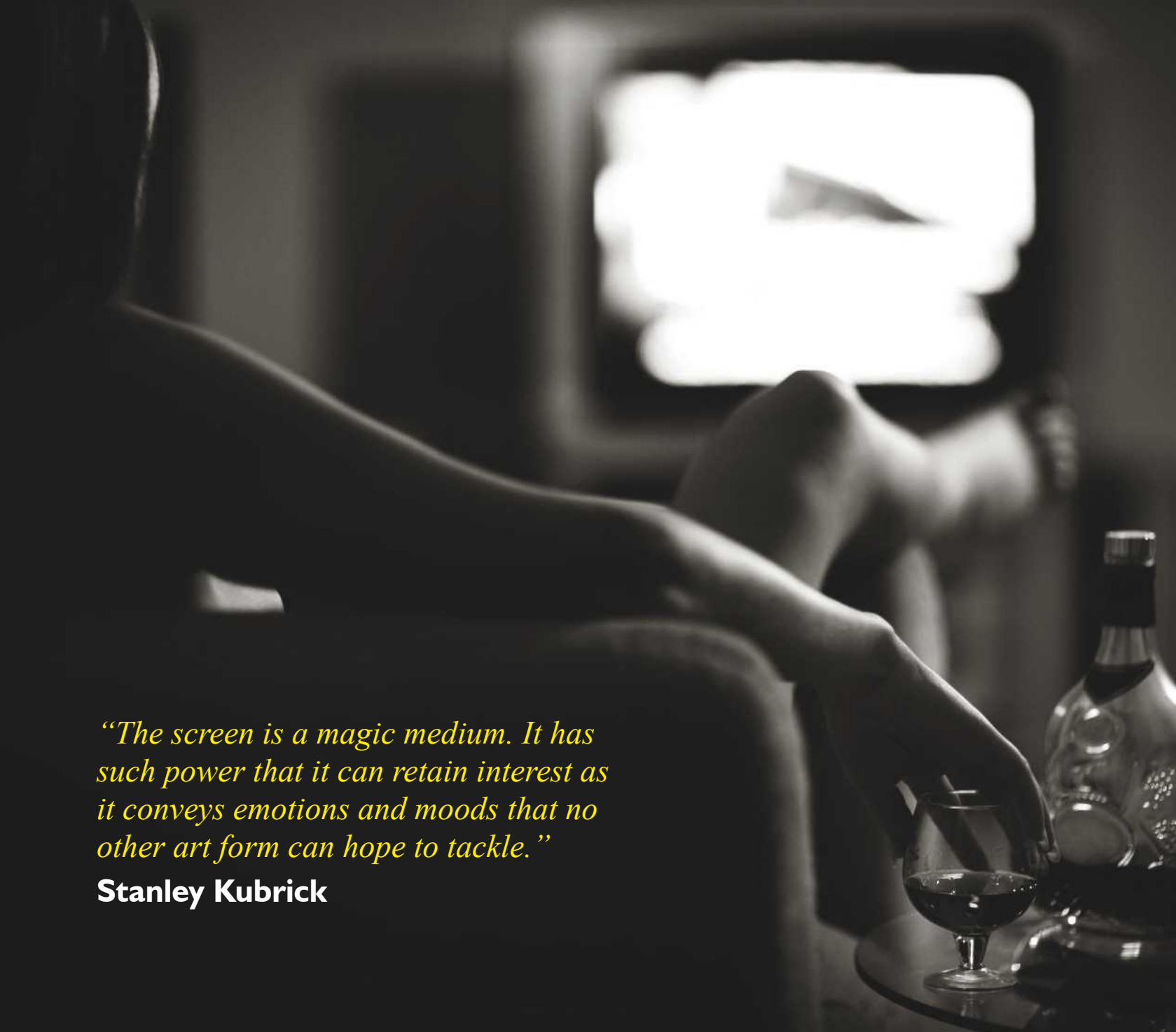
- A) *RoboCop* B) *Starship Troopers*  
C) *The Lawnmower Man*

Email your answer with 'Elle' as the subject heading – and don't forget to include your postal address!

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Jon thought Lumagen's Radiance Pro image processor was able to create a natural-looking HDR image on his projector. Should I ignore the brewing format war and accept that an image processor is a better way to upgrade to HDR?

Projectors are definitely not cheap to begin with. So if today's uplift in performance is not compelling should I just put my projector upgrade on hold until next year?

Jon Mitchell

**Jon Thompson replies:** I don't want to be the person to tell a home cinema enthusiast to postpone an upgrade. But while 4K projectors can easily give a more involving experience than their 2K counterparts, I remain convinced that there's work to be done when it comes to HDR delivery. In short, as you say, projector brands need to manage the high nit levels of content with the low nit levels a projection system offers. This takes clever processing, and ongoing development.

What is clear is that any 4K model you go for is most likely going to cost you more than you paid originally for your EH-TW9100. And these will be 'entry-level' 4K beamers. You may well find that the benefits of native 4K resolution and HDR (albeit not as much of a knockout experience as on a 4K HDR TV) are countered by performance traits not as good as those of your trusty Epson – motion handling, black level prowess, etc.

So far we've seen native 4K models from Sony, JVC, Acer and BenQ, plus pixel-shifting projectors from Epson and JVC. All at least can handle a 4K HDR signal. Some claim support for HLG HDR, as well as HDR 10.

The market will develop over the next year, with 4K models coming from Optoma and Vivitek, not to mention new models from the brands listed above. If you can be patient, it may be prudent to wait and see what arrives and, most importantly, how far prices can fall.

The Lumagen Radiance Pro processor sells for over £4,000. By all means get one if you can, but it's certainly not an option I'd suggest for everyone, and it's only as good as the other parts of your system.

### Your prices are wrong!

I've been a reader of your great magazine since the beginning and have noticed something. It's to do with the prices you put on the end of your disc reviews.

I'll use HCC #272 as an example. At the end of the *Rogue One* Blu-ray review you have it priced as £25, but it actually sells for £15. Even the 3D version is under £20. Also, at the end of your *Fantastic Beasts* UHD review you have that priced for £35 but it sells for £25.

I am interested to know where the prices come from because they don't sell for anywhere near those prices in shops/online.

Apart from that, any chance of a test on D-BOX seating? Has that been done yet?

Lee

**Anton van Beek replies:** It's quite simple really – all of our disc prices are based on the RRP's provided by the actual distributors (albeit rounded up to the nearest pound). This gives an indication of the maximum amount you should expect to pay for a title, without any individual retailer discounts. It's then up to retailers themselves to choose to offer discounts below this threshold – which clearly the vast majority of them do (especially during the first few weeks of a title's release).

But the spread of prices, even with online retailers, can still vary wildly. Looking online as I type this reply, you can pick up the *Rogue One* Blu-ray for £15 for Amazon, £23 from The Hut and a multitude of prices between those two benchmarks from myriad other retailers. The rule is: if you've paid less than the price we quote, then you've got yourself a good deal.



D-BOX is expanding its UK cinema base

**Mark Craven replies:** D-BOX? We've certainly written about it, yonks ago, but haven't had a good motion seat experience in a while. Even D-BOX itself doesn't offer a list of compatible Blu-rays. If any D-BOX'd readers want to share their thoughts, we're all ears ■

### Contact us...

Write to HCC, AV Tech Media Ltd, Suite 25, Eden House, Enterprise Way, Edenbridge, Kent, TN8 6HF, or email us at [letters@homecinemachoice.com](mailto:letters@homecinemachoice.com). Please note: we cannot guarantee to print/answer all the letters we receive. Sorry.



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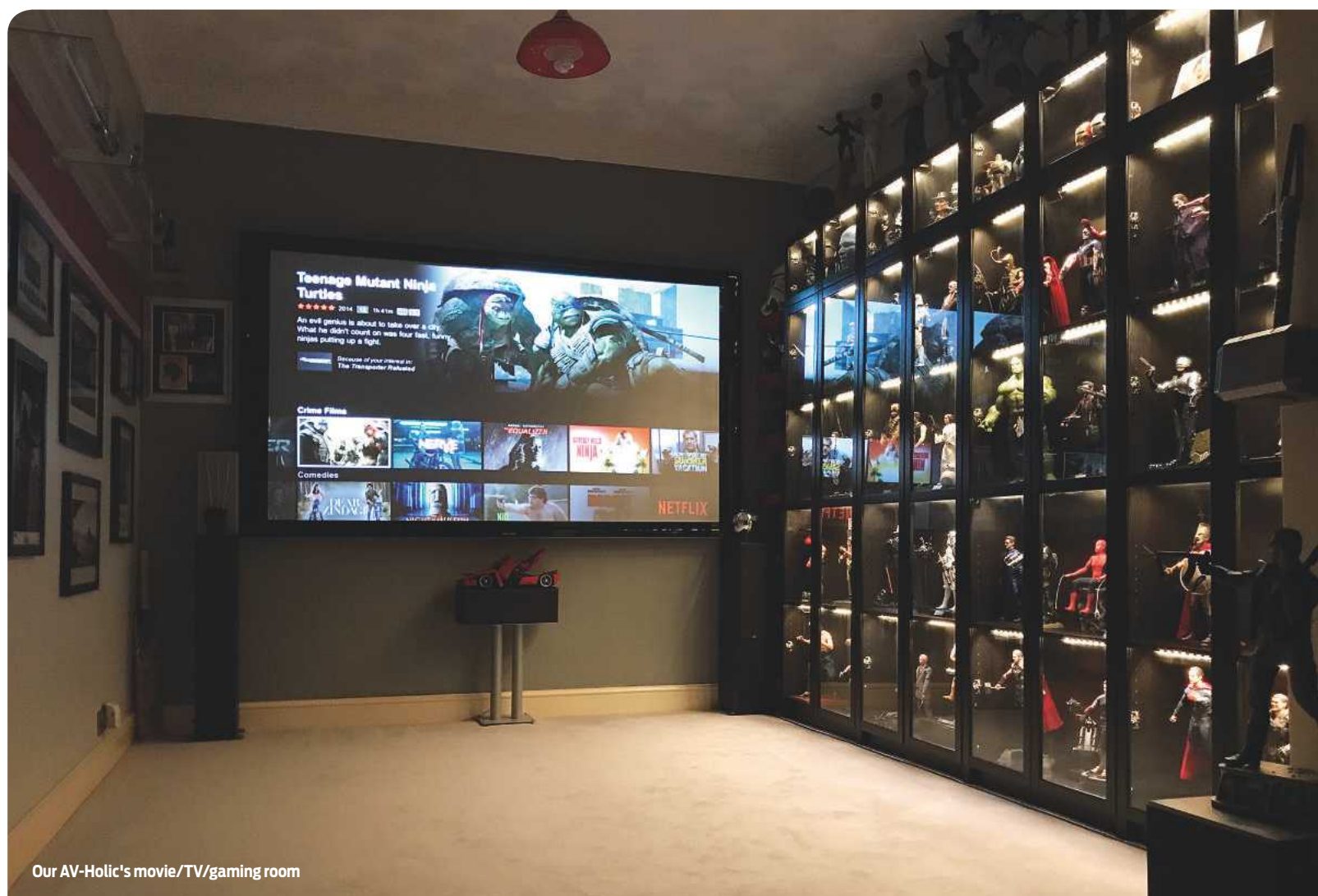
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# Certified: AV-Holic!

HCC reader **Shahid** is in no rush to upgrade his trusted home cinema gear, and only buys Steelbook Blu-rays. Here he guides you through his memorabilia-packed movie den



Our AV-Holic's movie/TV/gaming room



Something tells us Shahid's a *Star Wars* fan



The front wall houses a 100in 16:9 projector screen





### Introduce yourself...

I'm Shahid Ibrar and I live in East London with my wife and two kids. I'm 38 years old and own (and work in) a ladies' fashion shop.

### What's in your AV setup?

Most of the kit was bought about seven or eight years ago but still does a great job, so I have no complaints.

I have an InFocus IN76 projector and 100in Planar Xscreen projector screen (fixed-frame, 16:9 ratio), plus a 55in Samsung LED TV, which supports 3D.

The speaker system is 7.1, using Monitor Audio models, and a seven-channel Denon AVR-2807 to power it all.

For movies, TV and games I have a Sky+HD box, Apple TV, Xbox 360, Sony PlayStation 3 and PlayStation 4, and a Sony BDP-S760 Blu-ray player.

### What was the last thing you added to your system?

The last bit of kit to go into my setup was the PlayStation 4.

### And are you thinking of upgrading anything?

I am thinking about changing from my Sky+HD box to Sky Q, and about upgrading to a 4K budget projector in the near future.



Shahid takes his driving sims seriously

### What's your favourite bit of kit, and why?

The new PlayStation 4, as it is used frequently for games and now as a Blu-ray player, too.

### What are your Top Five favourite flicks?

*Rocky* is my all-time favourite. The others would be *Terminator 2*, *Avengers: Assemble*, *Scarface* and all of the *Star Wars* movies.

### What discs do you use to show off your system?

In the beginning I used *Terminator 2* but most recently to impress people I've been using *Rogue One: A Star Wars Story*. It's a great

movie to show off a system, as it has different kinds of sound effects.

### Do you stream movies/TV from Netflix/Amazon/Sky etc?

Yes, from Sky, Apple TV and Netflix. I'm currently loving *Daredevil S2* on Netflix.

### Does the setup get a lot of use?

I use the room mostly on weekends, especially when I receive my Steelbook Blu-rays, or for big boxing events or cricket matches on Sky.

### What do friends and family think of the cinema?

They love the cinema room, particularly my >



The Terminator likes to watch movies too...



nine-year-old daughter. She loves my figure collection – she can't stop staring at them and counting them every time she enters.

### Where did you get the storage cabinets from?

They are from Ikea and the Billy range. They were put together by a local builder and took about seven days to complete and get the joints together, as there was quite a big gap in between each of them and I wanted them to look museum-quality so didn't want any gaps. Then Ikea Dioder LED lights were installed, which again was not easy to hide them all, as the wires are white and the cabinets are black. But he has done a great job.

### What's the best thing about having a home cinema room?

It saves you a lot of money! Yes, it costs quite a lot to put everything together but once it's done it's done. As a family, any Marvel, DC or *Star Wars* movie we'll go out to watch in a cinema, but at the same time there are movies that we miss out for different reasons – watching at home on BD or digital saves a lot compared to buying four cinema tickets!

### Last question: do you only buy Steelbook Blu-rays?

I've only bought Steelbook editions for the last three or four years. With all the download and streaming options I don't see any point in buying normal Blu-rays. The reason I buy them is that they give me that collector feeling, and the artwork most of the time is great.

I buy around two or three each month, most pre-ordered. I was introduced to Blu-ray Steelbooks a bit late so had to pay quite a lot for some on eBay. I'm happy with my collection so far and have around 150, not all on display ■



Shahid's storage uses Ikea cabinets and LED lights



Steelbook Blu-rays are on show

## Share your cinema system in the mag!

If you want to be in **HCC**, you'll need to send us some hi-res images of your cinema room. Here are a few tips...

1. Go big. Set your camera to take images at the largest possible size, and at the highest resolution. Don't worry about cropping or resizing – we will make them print-ready.
2. Get in focus. Make sure your photos are as sharp and clear as possible. If you have one, use a tripod, or place your camera on a flat, steady surface and take pictures on a delay. The sharper they are, the bigger we can print them.
3. Let some light in. While we tend to watch movies in the dark, our cinema systems look their best when they are lit. If you can shoot with natural daylight, do so. If your room doesn't get a lot of light (a garage conversion, for instance) then switch on

whatever lights are fitted. Avoid using flash wherever possible.

4. Be thorough. Send photos of as much of the room as possible. Images of both the front and back of the room, the kit rack, speakers, seating, disc shelf, movie poster art... The more the merrier.
5. Don't be shy. Send a picture of yourself!

6. Show us more. Got pictures of your room before it was a cinema? Or snaps of work being done? We love to see these, too.

**Now what?** Email your images to [letters@homecinemachoice.com](mailto:letters@homecinemachoice.com) with the subject heading 'AV-Holic', and provide your answers to the relevant questions above – then we'll be in touch!



### ...And blag Denon's AH-MM200 headphones!

The kind people at Denon are giving away a pair of portable, over-ear headphones to our AV-Holic each month. The AH-MM200s, which typically retail for £120, feature 30mm triple-layer drivers, lightweight earcups and have been tuned to deliver a smooth, natural and faithful tonal balance. Two cables are provided – one with integrated controls and mic for portable use, another longer cable for home entertainment.



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# PLAYBACK

→ **SOFTWARE HIGHLIGHTS** **PATRIOTS DAY** Stirring tribute to American tragedy  
**RESIDENT EVIL: THE FINAL CHAPTER** The ultimate in Ultra HD or a 4K fright? **FIFTY SHADES DARKER** Saucy sequel unmasked in hi-def **THE WILD ONE** Brooding Brando blooms on Blu-ray  
**UNIVERSAL MONSTER MOVIES** Bumper boxsets of classic creature-feature sequels & MORE!

## The dork knight

The LEGO Batman Movie → Warner Bros. → All-region BD



Is this animated smash a smart, funny superhero satire or just an extended toy commercial? Find out as we take *The LEGO Batman Movie* Blu-ray for a spin on p99.

### HCC RATINGS KEY...

Outstanding	★★★★★
Above average	★★★★
Acceptable	★★★
Disappointing	★★
Dire	★

All prices quoted are approximate and may have changed





*Patriots Day* is Mark Wahlberg's third collaboration with Peter Berg – and all three films were based on real events



# Real tragedy meets fake thrills

Boston bombing thriller captures the spirit of the survivors, but makes a few missteps too



## → PATRIOTS DAY

Hot on the heels of the excellent *Deepwater Horizon* comes another true-life thriller from director Peter Berg and actor/producer Mark Wahlberg. This time around the focus is the 2013 Boston Marathon bombing and the subsequent manhunt for the two perpetrators of the incident.

Wahlberg plays Tommy Saunders, a fictional sergeant in the Boston Police Department who is stationed at the finish line when the bombs explode. Saunders goes on to witness all of the key events in the ensuing search for the suspects led by FBI Special Agent Richard DesLauriers (Kevin Bacon) and local Police Commissioner Ed Davis (John Goodman). *Patriots Day* also centres around a few of those caught up in the bombing, most notably young couple Jessica Kensky (Rachel Brosnahan) and Patrick Downes (Christopher O'Shea).

By creating the character of Tommy Saunders, Berg and Wahlberg give viewers a specific human focus for every aspect of the story. Yet this composite character also serves as a stand-in for every single cop who was involved in the events depicted, which leads to an unbelievable string of coincidences – Saunders is on the scene when the bombing takes place, is the one cop who can tell the FBI which buildings in the vicinity have CCTV, takes the statement of

carjacking victim Dun Meng (Jimmy O. Yang) and later pops up at the final hiding place of the second bomber. He's a busy man.

The film closes with interviews with some of the real people caught up in the bombing tragedy. As polished as *Patriots Day*'s fictionalised approach may be, perhaps its story would have been better told as a documentary.

**Picture:** *Patriots Day* runs onto Blu-ray with a largely appealing 2.40:1-framed 1080p encode that shows every sign of having been shot using digital cameras. Daylight scenes pop with colour and detail, while night shots conjure up deep, murky shadows. The only real negatives when it comes to image quality derive from the archival CCTV and broadcast TV material the film re-uses.

**Audio:** *Deepwater Horizon* boasted a thrill-a-minute Dolby Atmos mix; this Blu-ray's DTS:X soundtrack is a little more everyday but still impressive – adept at delivering low-key atmospherics (such as the construction of the stands in preparation for the marathon in Chapter 2) and meeting the demands of more action-filled sequences (a chaotic street shoot-out in Chapter 11). Dialogue is always discernible, while the excellent Trent Reznor/Atticus Ross score is given plenty of prominence.

**Extras:** Seven short featurettes split their focus between real-life interviews and the recreation of key events. Not bad, but a chat-track would have been nice.



## HCC VERDICT

### *Patriots Day*

→ Lionsgate → Region B BD  
→ £25

**WE SAY:** The film itself may not be 'Boston Strong', but this Blu-ray has other strengths.

Movie: ★★★★★

Picture: ★★★★★

Audio: ★★★★★

Extras: ★★★★★

**OVERALL:** ★★★★★



## Fences

Paramount/Universal Pictures  
All-region BD → £25



There's no denying that this screen adaptation of August Wilson's celebrated play about racial tension in 1950s

America gives Denzel Washington plenty to sink his teeth into as an actor. Trouble is, Washington's direction fails to find a way of opening the story up beyond its stage-bound origins, the result being a distinctly uncinematic viewing experience. This Blu-ray's 1080p encode has rich detailing on its side, but the DTS-HD MA 7.1 mix feels like a waste given how infrequently the audio moves beyond the front speakers. Five behind-the-scenes featurettes are included.



## Silence

StudioCanal → Region B BD  
£25



A long-term passion project for director Martin Scorsese, this historical drama stars Andrew Garfield and

Adam Driver as two Jesuit priests who travel to 17th Century Japan – where Christianity has been outlawed – in search of their missing mentor (Liam Neeson). Equal parts beautiful and brutal, *Silence* feels like a logical progression from Scorsese's previous religious epics *The Last Temptation of Christ* and *Kundun* – and fans of those films should give it a whirl on Blu-ray, where they can really savour its stunning 1080p visuals.



## Hidden Figures

Twentieth Century Fox → All-region BD  
£25



The combination of a little known, but remarkable, true story and three charismatic leads (Taraji P. Henson, Octavia Spencer and Janelle Monáe) carry this rather prosaic film

detailing the key role African-American women working at NASA in the 1960s played in getting John Glenn into orbit and bringing him back alive. Fox's well-specified Blu-ray package supports its attractive 2.40:1 Full HD visuals and immersive 7.1-channel DTS-HD Master Audio mix with an engaging audio commentary, a five-part *Making of...*, eight deleted scenes and a short video about filming in Georgia.



# The punishment continues...

You'd have to be a masochist to willingly suffer through this painful sequel

## → FIFTY SHADES DARKER: UNMASKED EXTENDED EDITION

Given that *Fifty Shades of Grey* ended with Anastasia Steele (Dakota Johnson) dumping billionaire playboy Christian Grey (Jamie Dornan) due to his fondness for inflicting pain in the bedroom, you might expect this sequel to be all about getting the pair back together. As it happens, *Fifty Shades Darker* wastes little time reuniting the couple, setting the scene for yet another romantic melodrama punctuated by a series of rose-tinted romps.

Presumably aware that watching Ana and Christian go through the S&M motions yet again can only carry a film so far, *Fifty Shades Darker* introduces a series of external threats to their relationship. These include a new boss for Ana with his own designs on her body, a gun-toting stalker and the jealous older woman (Kim Basinger) who first brought out Christian's kinky side. Sadly none of these additions, nor a final reel helicopter crash, do anything to raise the dramatic stakes above the level you'd expect from a daytime soap opera.

Worse still, Christian Grey remains a man whose every word and action would send any right-thinking woman running straight to the police. He constantly behaves like a creepy, controlling oddball. Team HCC can't see the attraction, but then perhaps we're not this film's target audience. And when it comes to what goes on in the bedroom (or the kitchen, the bathroom, the games room, etc.), *Fifty Shades Darker's* sex scenes are boring at best and laughable at worst. This is clearly a real problem for a piece of so-called erotica.



It's *Eyes Wide Shut* all over again!

**Picture:** The disc packs a rich, warm 2.40:1-framed 1080p encode that is way better than the actual movie, finding beauty in the opulent locations and costumes. Fine textures are pronounced, doing a particularly good job of picking out every hair and dimple in the many close-ups of naked skin.

**Audio:** Is a DTS:X soundtrack a little OTT for a film like this? Possibly, but those with compatible setups are rewarded by its knack of making the various locations feel like very different spaces by virtue of individual acoustics. The height layer also gets a run-out with Chapter 16's helicopter crash and Chapter 19's fireworks.

**Extras:** The Blu-ray serves up both the theatrical cut (118 minutes) and an 'Unmasked' version (131 minutes). Also included are two deleted scenes, a teaser for *Fifty Shades Freed*, and six featurettes looking at the characters, the director, the writing process and shooting specific sequences.



## HCC VERDICT

### Fifty Shades Darker: Unmasked Extended Edition

→ Universal Pictures → All-region BD  
→ £25

**WE SAY:** This limp sequel fails to generate any real heat.

Movie: ★★★★★

Picture: ★★★★★

Audio: ★★★★★

Extras: ★★★★★

**OVERALL:** ★★★★★



# End of the apocalypse

Milla Jovovich's Alice is game for one last round of zombie blasting in this 4K action-horror franchise finale...



## → **RESIDENT EVIL: THE FINAL CHAPTER**

This sixth and final instalment to a surprisingly resilient fantasy franchise picks up sometime after *Resident Evil: Retribution*, and seems determined to end the show with as much chaotic splatter as possible.

The plot sees zombie butt-kicker Alice (Milla Jovovich), series returnee Claire Redfield (Ali Larter) and assorted cohorts (but not Jill Valentine)



## Is this final *Resident Evil* sequel another must-own for 3D Blu-ray fans?

Over the course of his last four films – *Resident Evil: Afterlife* (2010), *The Three Musketeers* (2011), *Resident Evil: Retribution* (2012)

and *Pompeii* (2014) – director Paul W.S. Anderson has embraced stereoscopic technology and demonstrated an affinity for 3D that few other filmmakers have matched. The result, in each case, has been one of that year's best 3D Blu-ray releases.

With 3D Ultra HD Blu-ray a complete no-go, the big question was whether the 'regular' *Resident Evil: The Final Chapter* 3D Blu-ray would compare well to its superb predecessors. Sadly, unlike Anderson's previous endeavours which were all shot in native 3D, this sequel was converted in post. And it shows.

In one of the featurettes that accompanies his film, Anderson boasts that there are 5,000 edits in *Resident Evil: The Final Chapter*. Given that the film runs for 106 minutes and 33 seconds, that's an average shot length of just 1.28 seconds. Take out the end credits and the average shot length is even shorter.

Naturally, this makes the action incredibly difficult to follow in 3D, where your eyes barely have time to adjust for one image before the next comes along. An early attack on a moving vehicle by a mutated monster (Chapter 2) may happen in broad daylight, but it's still rendered almost impossible to follow in 3D by the brevity of the shots.

What makes this all the more annoying is that those rare moments where the editing takes a



breather show the depth and clarity the MVC 2.40:1 1080p encode is capable of producing. But it's still not enough to make *Resident Evil: The Final Chapter* worth bothering with on 3D Blu-ray – which will come as a huge blow to fans of the franchise and the format.



square off for a climactic confrontation with the Umbrella Corporation, in an effort to release an airborne antivirus that could stop the T-Virus dead in its tracks (sic), before the last enclaves of humanity fall to the undead hordes.

This time around, the creepy little Red Queen becomes an unlikely ally, offering to help take down Umbrella Corp owner/bonkers messianic scientist Alexander Isaacs (Iain Glen), now more deranged than ever after his untimely death in 2007's *Resident Evil: Extinction*.

Needless to say, this final instalment isn't a good jumping on point for the zombie-curious. While an exhaustive recap is provided, the convoluted myths will mean little to a *Resi*-newbie. But for the long-suffering faithful, there are plenty of references to earlier entries to enjoy, and, yes, the laser corridor is back for one last slice and dice.

Like the films that have preceded it, *Resident Evil: The Final Chapter* is probably less than the sum of its parts, but there are moments to savour if monster mayhem is your thing. There's barely time to catch your breath as Jovovich pirouettes and spins her way through a series of spectacular set-pieces. However, while the stunt sequences are imaginative and often stunningly choreographed, they are strung together at such a furious tilt they almost blur. The film (presumably intentionally) has the full-pelt pace of a console title, indeed watching it is rather like watching someone else play a video game. Still, you'll not find it short of AV system-stretching moments.

Before anybody gets too upset about the series coming to a close, production company Constantin Films has already confirmed that work is underway on rebooting the film franchise with a new cast and James Wan onboard as producer.

**Picture:** Image quality is largely impressive. The film was shot at 5K, with extensive VFX rendered at 2K, resulting in a 4K digital intermediate; the overall look is reasonably detailed, particularly big close-ups. Opening scenes of a devastated US capital feature lashings of visual minutiae, which is great fun to scrutinise.

The colour palette is predictably stylised, with the post-apocalyptic landscape cruelly desaturated (the end of the world will be sepia, it's official); the only flashes of vibrancy being explosions. There's no obvious exploitation of a wider colour gamut. Similarly, the most dramatic use of HDR highlights occur during the climax, with torches and lens flare providing realistic dazzle. The opening post-title sequence of Alice meandering through a devastated Washington DC, after facing off against a Jabberwocky (who knew?), has an average bitrate of less than 30Mbps.

The disc is likely to prove a genuine torture test for 4K displays, too. The latter half of the movie, when Alice and her merry band launch their



*Resident Evil 6's Bloodshot makes its bigscreen debut in this sixth movie*

assault on The Hive (in almost pitch dark and via poorly-lit tunnels) will no doubt result in plenty of screens struggling to reveal near-dark detail.

**Audio:** *Resident Evil: The Final Chapter's* Dolby Atmos soundtrack is loud – although not necessarily in a good way. It's been mixed hot, like radio pop. Not dynamic, just uniformly cranked up for maximum sledgehammer effect. Noise is spread evenly like jam into every channel. Gunfire, gore, growls – you name it, they all play at the same level. We had to listen some 10dB down from our standard home theatre reference level, because this sonic blancmange was just too much.

That's not to say the Dolby Atmos mix doesn't entertain. Plenty of stuff happens in the round, with atmospheric effects heightening the sense of immersion. Non-Atmos owners should note that the 7.1 audio design is comparably rewarding. Top marks also for the terrific doom-synth score by Paul Haslinger, which adds immeasurably to the mood. **Extras:** There's no supplemental fun provided on the 4K platter beyond a basic cast and crew picture gallery. For anything more than that you'll have to turn to the 'regular' Blu-rays it is bundled with.

The chief extra on the Blu-ray is a 'Retaliation Mode' that allows you

to watch the film with occasional cut aways to Milla Jovovich and Paul W.S. Anderson chatting about the making of the movie.

Also included on the disc are a preview of this Summer's *Resident Evil: Vendetta* animated flick, plus a trio of behind-the-scenes featurettes about stunts, the creation of The Hive and the franchise's female stars.

This is bolstered by a bonus Blu-ray platter housing four additional featurettes.

These include a chat with Japanese model-turned-actress Rola and a look at Paul W.S. Anderson's directing style.



*Resident Evil is now the highest grossing horror film franchise of all time!*



*Can Alice and chums finally put an end to the nefarious Umbrella Corporation?*



*Ali Larter returns as series regular Claire Redfield*

## HCC VERDICT

### *Resident Evil: The Final Chapter*

→ Sony Pictures → Ultra HD BD & All-region BD → £30

**WE SAY:** This decent 4K package provides a fittingly kinetic end to the kick-ass horror series.

Movie: ★★★★★

Picture: ★★★★★

Audio: ★★★★★

Extras: ★★★★★

**OVERALL:** ★★★★★



## Arcade Action

Bigscreen home entertainment isn't just about movies anymore. **Rik Henderson** checks out a videogame vying for time on your home cinema system...



### Prey

Bethesda → PlayStation 4, Xbox One, Windows PC → £55

While it slipped under many people's radars, the original 2006 first-person shooter *Prey* was an excellent slice of sci-fi fun. If you have an Xbox 360 or PC you might want to try it still. However, it doesn't hold a candle to the latest version, which not only benefits from the power of the latest generation of gaming machines, but also has more than enough ideas to refresh the FPS genre.

In fact, the finished game feels more like a survival horror than an FPS, with some seriously big jump scares and plenty of empty, isolated corridors to wander around.

Part of the scariness comes from your enemies and their abilities. There are creepy aliens scattered around the space station you're marooned in, but they are par for the course with this type of game. Instead, it is the 'Mimic' class that most alarms – for the first few hours of the single-player campaign, at least.

As their name suggests, they can mimic normal, everyday objects, such as a coffee mug, chair or blackboard. And because they seem to jump out at you after you pass by, you'll initially go around smacking every inanimate object you encounter.

It becomes easier soon after, as you gain powers to aid you – including the power to mimic objects yourself. This means you can turn into cups and the like in order to progress, and it is here that the unique nature of *Prey* comes to the fore.

After completing the opening sequences, the game can be tackled in multiple ways. You can progress like a banshee, taking out aliens as you find them, or adopt a more stealthy approach. You can also solve puzzles in different ways, sometimes in the form of kitchenware(!). There's never a dull moment, that's for sure.

*Prey* is also graphically stunning, with an art style reminiscent of *BioShock* and developer Arkane's own *Dishonored* series. It runs in full 4K on a PC, if you're lucky to own a capable graphics card. Strangely, at the time of writing, PS4 Pro owners don't have much benefit over the standard PS4 version, but it does run in 1080p at a stable 30fps.

It's also matched by a haunting sound effect board that'll put the willies up you when played on a surround sound setup.



## Fortitude: Complete Season 2

Warner Bros. → All-region BD  
£40



Having transitioned from murder-mystery to body horror in its first season, this second run finds the Arctic town facing new threats from within and without. As enjoyable as the show remains, it suffers from introducing so many new ideas (Cannibalism! Ancient demons! Illegal medical experiments!) that it doesn't really have the time to bring it all to a satisfying resolution. At least binge-watching the show on Blu-ray helps alleviate the meandering pace, and allows you to savour some stunning 1080p visuals and atmospheric DTS-HD MA 5.1 sonics.



## Orange is the New Black: Season Four

Lionsgate → Region B BD  
£40



There are few shows that can balance comedy and tragedy as effectively as *Orange is the New Black* – and never has that been any truer than in this fourth season. One moment you'll be laughing at a pastiche of Martha Stewart, the next it'll pull the rug out from under you with a scene of heartbreaking loss. This latest Blu-ray set mirrors its predecessors almost exactly, splitting the 13 episodes and modest extras (three episode commentaries, a set tour and gag reel) across a trio of BD50s. This consistency carries across to the excellent quality of the AVC 1.78:1 1080p imagery and DTS-HD MA 5.1 mixes, too.



## The Last Kingdom: Season Two

Universal Pictures → All-region BD  
£30



'We had to deliver everything we delivered in the first season and more,' says exec producer Gareth Neame of this second series of the BBC's answer to *Game of Thrones*. They clearly succeeded, as this new eight-episode run is a triumph, building on all that came before to deliver an intoxicating mix of awesome battle scenes and gripping storytelling. This BD release trumps the TV broadcasts with stellar Full HD visuals and dynamic DTS-HD MA 5.1 audio. The three-disc set also finds room for a 17-minute *Making of...* and a 'Story So Far' video.







# Building a better Batman

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Where does he get all those wonderful toys? Probably a LEGO Store like everyone else...

## → THE LEGO BATMAN MOVIE

While foiling yet another of the villain's schemes to destroy Gotham City, Batman (Will Arnett) adds insult to injury by telling the Joker (Zach Galifianakis) that he isn't his greatest foe; the Caped Crusader prefers to promiscuously 'fight around'. Outraged by Batman's unwillingness to acknowledge the huge role he plays in his life, Joker plots his revenge.

Meanwhile, over at Wayne Manor, Alfred the butler (Ralph Fiennes) is increasingly concerned by Batman's unwillingness to let anybody into his life. The situation is only exacerbated by the Dark Knight's stubborn refusal to work with Gotham's new police commissioner, Barbara Gordon (Rosario Dawson), and his ambivalence towards Dick Grayson (Michael Cera), the orphan he accidentally adopts at a lavish city gala.

A far more satirical and subversive superhero movie than last year's overrated *Deadpool*, this spin-off from 2014's *The LEGO Movie* is one of the most enjoyable Batman movies ever made. It's also a refreshing antidote to the relentlessly grim version of the character often foisted on audiences, embracing the inherent silliness of the setup as well as being loaded with in-jokes relating to past incarnations of the character (in print and on the screen) – but never at the cost of excitement or action.



Director Chris McKay puts it best in one of the Blu-ray's extra features, stating: 'We wanted to make a movie that felt like an 11-year-old Michael Bay and an 11-year-old Henry Selick got together to make the craziest, most artistic-looking movie ever.' They've certainly succeeded.

**Picture:** As you might expect, *The LEGO Batman Movie*'s 2.40:1 1080p Blu-ray encode looks an awful lot like that of *The LEGO Movie*. That's no bad thing as it once again results in a dazzling visual experience, flaunting a varied palette of richly saturated colours, deep blacks and masses of pixel info that draws out imperfections in the individual LEGO bricks.

**Audio:** Warner's Dolby Atmos soundmix doesn't hit quite as hard as the Blu-ray's imagery quality. There's never any shortage of whizzy FX placement in the surround speakers, plus a robust LFE channel,

but use of the vertical dimension is less consistent. Some big action scenes, such as the chaotic Gotham Energy attack, appear short of much in the way of height effects, despite ample opportunity.

**Extras:** Director Chris McKay joins a room full of crew members for a detailed (and very funny) commentary track. Other goodies include five animated shorts; four deleted scenes; five behind-the-scenes videos; competition-winning fan films; and a collection of 10 trailers and other promo videos.



Who knew that Joker and other Batman villains could look so cute?



## HCC VERDICT

### The LEGO Batman Movie

→ Warner Bros. → All-region BD  
→ £25

**WE SAY:** A great-looking hi-def debut for a fresh and funny superhero film.

Movie: ★★★★★

Picture: ★★★★★

Audio: ★★★★★

Extras: ★★★★★

**OVERALL:** ★★★★★



# Bored of the Rings yet?

Videotape may have died a death, but Samara's curse lives on...

## → RINGS

In the quarter of a century since Suzuki Koji's horror novel *Ring* was first published his story has spread as rapidly as the tale's cursed videotape. From film and TV adaptations to a multitude of sequels and even a crossover with the similarly long-haired ghoul from *The Grudge*, Koji's story keeps being reinvented for new audiences.

Which is why, a decade after *The Ring 2* limped out of cinemas (and almost a year after the final VCRs rolled off the production line), Hollywood has seen fit to torment fright fans with a second sequel to Gore Verbinski's well-regarded 2002 US remake.

Yet despite an intriguing setup that brings Samara's haunted videotape into the digital age, *Rings* transpires to be a formulaic affair. It feels more like a straight-to-video sequel than a film designed to watch at a multiplex.

Director F. Javier Gutiérrez manages to craft a couple of effective scares and the freakishly flexible actress Bonnie Morgan ensures that Samara is as creepy as ever. But these efforts are wasted on a story that is content to retrace the original, albeit with an even more convoluted origin for the ghost. And while the original flick backed up its horror with adult protagonists, here the writers have gone in favour of a bunch of bland college students.

Buried beneath all of this sloppy storytelling there's the kernel of a good idea, one that could have taken the franchise in an exciting new direction. But that was presumably a step too far for a studio that merely hoped to use the series name to rake in some extra dollars from a teenage audience.



She's behind you!

**Picture:** Clearly patterned after the visual style of Gore Verbinski's remake, *Rings* opts for a deliberately dark and cold palette that favours crushed blacks, cold blues and sickly greens. While this excessive grading doesn't have a knock-on effect on detailing, banding does raise its head from time to time.

**Audio:** The Blu-ray's DTS-HD MA 7.1 mix utilises the entire speaker configuration to serve up all you'd hope for from a horror sequel. Whether it's subtle atmospheric details or something more aggressive (such as the opening Chapter's aeroplane sequence), it's constantly involving. Probably the best thing about the Blu-ray, really.

**Extras:** *Terror Comes Full Circle* (13 minutes) offers an overview of the film's production; *Resurrecting the Dead: Bringing Samara Back* (nine minutes) focuses on creating the film's ghoul; and *Scary Scenes* (seven minutes) sees the cast discuss their favourite moments. Rounding things out are 14 deleted scenes.



## HCC VERDICT

### Rings

→ Paramount/Universal Pictures  
→ All-region BD → £25

**WE SAY:** Not the worst horror sequel you'll ever see, just a thoroughly dull and generic one.

Movie: ★★★★★

Picture: ★★★★★

Audio: ★★★★★

Extras: ★★★★★

OVERALL: ★★★★★

## Brain Damage: Limited Edition

Arrow Video → Region A/B BD & R1/2 DVD → £25



Leave it to Frank 'Basket Case' Henenlotter to cook up a twisted drug addiction allegory that involves a young man falling under the spell of a chatty, brain-eating parasite called Elmer, who secretes an hallucinogenic fluid. Shot on 35mm, this 1988 cult favourite lands on Blu-ray in an authentically gritty (and uncut) 1.85:1 Full HD presentation. Backing up the film is an awesome array of extras including a director's commentary, an isolated score, an hour-long retrospective documentary, a location tour, new interviews, trailers and an animated short.



## Meridian

88 Films → Region B BD  
£13



*Beauty and the Beast* gets an erotic makeover in this 1990 Charles Band flick, which is mainly notable for a

scene in which a pre-*Twin Peaks* Sherilyn Fenn is drugged and gets horizontal with a bigfoot lookalike. Even if you look past the dodgy sexual politics, *Meridian* (aka *Phantoms*, aka *The Ravaging*) is a turgid effort that even fans of trash cinema will struggle to see through to the final credits. It also doesn't help that this Blu-ray's reframed 1.78:1 presentation is so much darker than the same label's old 1.33:1 DVD release, making it a struggle to even see what's going in several scenes.



## Amuck!

88 Films → Region B BD  
£15



Barbara Bouchet stars in this wonderful 1972 *giallo* that ditches the genre's familiar black-gloved killer trope for

a mix of titillation and psychological torment, making it feel like an early precursor to the erotic thrillers that proliferated on video during the 1990s. In addition to a 2K restoration of the film (from the original 35mm negative) and a choice of cleaned-up English or Italian LPCM 2.0 dubs, this terrific Blu-ray also plays host to brand-new interviews with Bouchet and co-star Rosalba Neri, a 2013 Q&A with Bouchet, and a four-page leaflet of liner notes.



## The Mighty Peking Man

88 Films → Region B BD & R2 DVD  
£15



The Shaw Brothers do *King Kong* in this 1977 flick made to cash-in on Universal's remake of the giant ape movie.

Rather than just follow the template of the classic monster movie, this gloriously daft low-budget effort also throws in a wild woman (Evelyn Kraft) in a skimpy fur bikini to keep you interested between shots of a man in a monkey suit trampling on model buildings. The 2.40:1 1080p encode exhibits signs of mild noise reduction, but still looks pretty good. Extras are a trailer and a chat-track by Hong Kong cinema expert Bey Logan.







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**Live by Night** is reported to have lost Warner Bros. around \$75 million!



# Right director, wrong actor

Affleck's latest outing behind the camera comes a cropper because of his work in front of it

## → LIVE BY NIGHT

For his fourth film as director, Ben Affleck has returned to where he started with an adaption of another Dennis Lehane novel. Sadly, unlike that superb first effort (2007's *Gone Baby Gone*), this Prohibition-era gangster film is an oddly flat and lifeless affair that is primarily undone by Affleck's choice of leading man – himself.

Affleck plays Joe Coughlin, a Boston stick-up man who is betrayed by the woman he loves and left for dead by her boyfriend, Irish mob boss Albert White (Robert Glenister). Emerging from prison three years later, Coughlin agrees to help Mafia boss Maso Pescatore (Remo Girone) take control of the bootlegging business in Florida, knowing that it will enable him to get his revenge on White. But even after gaining control of the rum-running business, Coughlin discovers that he still has his hands full dealing with the Ku Klux Klan and a reformed drug addict-turned-revivalist preacher (Elle Fanning) – who is also the local police chief's daughter.

There's clearly a lot going on in *Live by Night* and the synopsis above only really scratches the surface of the myriad plots and subplots running through the film (rumours abound that the studio forced Affleck to cut around an hour of material from the final edit). Because of this, it often feels less like a film than a highlights package from a TV drama along the lines of *Boardwalk Empire*. Affleck's use of narration to paper over the gaps doesn't help either, as it often ends up alluding to events that leave you thinking,



### HCC VERDICT

#### Live by Night

→ Warner Bros. → All-region BD  
→ £25

**WE SAY:** A stunning HD presentation of a lavish period crime drama that ultimately falls some way short of its own epic pretensions.

Movie: ★★★★★

Picture: ★★★★★

Audio: ★★★★★

Extras: ★★★★★

**OVERALL:** ★★★★★

'That sounds really interesting. I wish we could see that instead of what's going on now.'

As mentioned at earlier, though, the film's biggest failing is Affleck's presence in the lead role. The stoicism he utilised so well as the Dark Knight in *Batman v Superman: Dawn of Justice* is a huge stumbling block here; he simply can't conjure up the freewheeling attitude and charisma needed to convince as the sort of man who can win over his enemies with charm alone.

**Picture:** Photographed by Robert Richardson using vintage Panavision 65 lenses, *Live by Night* sure looks sensational.

From the opening shots you're immediately struck by the precision of the 2.40:1-framed 1080p image. Intricate detailing and warm colours are balanced by deep shadows that deliberately bring to mind classic film noir productions. In one word: opulent.

**Audio:** The Blu-ray's Dolby Atmos mix does a very good job of bringing the period locations to life through discrete atmospheric effects. Better yet,

it also knocks it out of the park when it comes to big action set-pieces – the car chase (Chapter 2) and hotel gunfight (Chapter 11) being the most dynamic and thrilling examples.

**Extras:** A reasonable selection of goodies includes a chat-track, five deleted scenes, a look at the shooting of the car chase, two cast featurettes and a piece about author Dennis Lehane.





**Toni Erdmann**

Soda Pictures → Region B BD £23



While the very idea of a two-hour-forty-minute German comedy is enough to send some running, writer-director

Maren Ade's latest is a blisteringly funny treat. Utterly bonkers (in the very best way), the film stars Peter Simonischek as an eccentric dad who dons a wig and goofy false teeth in order to stalk his uptight business executive daughter (Sandra Hüller). And it's not just the film's jokes that will put a smile on your face, as this Blu-ray also delivers a pleasingly crisp and refined 1.85:1-framed 1080p encode, plus some rather amusing bonus goodies – including two outtakes reels.

**Performance: Premium Collection**

Warner Bros. → All-region BD &amp; R2 DVD £15 (HMV Exclusive)



Co-directed by Nic Roeg and Donald Cammell, this pioneering 1970 movie starts out like a typical late gangster

flick but soon transforms into a highly symbolic exploration of personality and the lines between reality and fantasy.

*Performance* first saw the light of day on Blu-ray in 2014 as part of the Warner Archive range in the US, but while it looked great that disc was saddled with a soundmix featuring some re-dubbed audio. Thankfully, while this UK disc replicates the US platter in every other regard, the soundtrack has been fixed.

**The Time Machine: Premium Collection**

Warner Bros. → All-region BD &amp; R2 DVD £15 (HMV Exclusive)



It may look pretty dated today and gets nowhere near doing justice to its source material, but director George Pal's

1960 sci-fi skirts along on the same sort of goofy charm that still makes the likes of *The Land That Time Forgot* so watchable. While the Blu-ray undoubtedly improves on previous releases, the 1.78:1 encode struggles with fine detailing and the remixed DTS-HD MA 5.1 mix is very limited, only really coming to life during the confrontation with the Morlocks in Chapter 10. Extras include the trailer and a 48-minute retrospective featurette.

**Outland: Premium Collection**

Warner Bros. → All-region BD &amp; R2 DVD £15 (HMV Exclusive)



The classic Western *High Noon* gets a gritty sci-fi makeover in this 1981 film from director Peter Hyams. While

Sean Connery is excellent as *Outland*'s beleaguered hero, the real star of the show is the incredible production design, which makes the film's grimy vision of the future that much more convincing. As well as an excellent 2.40:1 1080p encode, this Blu-ray also houses a fairly effective DTS-HD MA 5.1 mix (possibly based on the six-track mix used for the film's 70mm incarnation). Extras are limited to a trailer and commentary.



# Fishing for answers to big questions

Terry Gilliam's second movie involving a quest for the Holy Grail is a much more spiritual affair

→ **THE FISHER KING**

A melting pot of mythology, romance, tragedy, social commentary and comedy, this 1991 film stars Jeff Bridges as cynical New York City radio shock-jock Jack Lucas, whose life falls apart when an unstable listener takes his latest hate-filled rant to heart and goes on a killing spree.

Wandering the city at night in a drunken stupor, Jack is attacked by a couple of thugs. His salvation arrives in the form of Parry (Robin Williams), a deluded and homeless former academic on a quest to find the Holy Grail. When Jack discovers that Parry's wife was killed in the shooting he inadvertently caused, he sets about helping the man in the hope of making amends for his past deeds.

Burdened with a few too many ideas and shifts in tone, *The Fisher King* is nonetheless another success for director Terry Gilliam and ranks alongside *12 Monkeys* as the most accessible of his films. While there are still flashes of the offbeat and grotesque elements that haunt all of his movies, Gilliam reins them in here to work in service of the story and the emotions the film is dealing with, rather than overwhelming it.

And at the heart of it all are two fantastic lead performances; with the late Robin Williams doing some of the very best work of his career.

**Picture:** Based on a 2K scan of a 35mm interpositive and approved by the director, Criterion's Blu-ray presentation of *The Fisher King* is very impressive for the most part. There's an authentically film-like appearance to the 1.78:1 Full HD encode that



includes a clearly defined layer of film grain. Clarity and colour reproduction are also very good. It's held back from perfection, however, by a few instances of what appears to be compression-related blocking.

**Audio:** Remastered in 24-bit from the original 35mm six-track magnetic tracks, *The Fisher King*'s modest DTS-HD MA 5.1 soundtrack doesn't offer too much in the way of immersive effects, instead crafting a lively front-end with plenty of movement across the stereo spread – all backed up by some effective low-end weight. Meanwhile, dialogue and music are perfectly balanced in the mix.

**Extras:** Goodies include a director's commentary (recorded in 1991 for the Criterion Laserdisc); a new two-part *Making of...* documentary; deleted scenes; a look at making the film's Red Knight; Jeff Bridges' on-set photos; an archival interview with Williams; costume tests; rehearsal footage; and trailers.

**HCC VERDICT****The Fisher King**

→ The Criterion Collection  
→ Region B BD → £28

**WE SAY:** A delightful Blu-ray outing for Terry Gilliam's unexpectedly affecting modern fairy tale.

Movie: ★★★★★

Picture: ★★★★★

Audio: ★★★★★

Extras: ★★★★★

**OVERALL:** ★★★★★



# Taking a walk on the wild side

Brooding Brando looks better than ever in this restoration of the classic biker movie

## → THE WILD ONE: LIMITED EDITION

- 'Hey Johnny, what're you rebelling against?'
- 'Whadda ya got?'

The original outlaw biker film, 1953's *The Wild One* stars Marlon Brando as Johnny, the leather-clad leader of the B.R.M.C. (Black Rebels Motorcycle Club). When Johnny and his gang descend on the sleepy town of Wrightsville, they're greeted with mild amusement by most of the locals. However, when the arrival of another gang led by Johnny's rival Chino (Lee Marvin) stirs things up, a group of townsfolk decide to take matters into their own hands, with predictably tragic results.

Clearly a lot has changed in the decades since *The Wild One* was first released. For all of their carousing and anti-authoritarian antics (which saw the BBFC ban the film for 14 years on this side of the Atlantic), Johnny and his gang are actually pretty genial types; we're a long way from *Sons of Anarchy* here. The bikers' fondness for big band jazz seems pretty odd, too, until you remember that cinema's rock 'n' roll revolution didn't really get underway until *The Blackboard Jungle*'s use of *Rock Around the Clock* a couple of years later.

But no matter how outdated many elements of *The Wild One* seem today, Brando's magnetism holds it all together. Without him the film would probably seem pretty risible; a cartoonish piece of social commentary. But with him it becomes that little bit edgier, sexier and more dangerous – and is all the more enjoyable.



Brando's bikers are more mild than wild

**Picture:** Sourced from an 'HD remaster' supplied by Sony Pictures, *The Wild One* cuts a fine figure on Blu-ray. The 1080p rendering of the film's 1.37:1 black-and-white photography reveals plenty of fine detail and authentic contrast levels. While a handful of night shots contain an anomaly with bright light sources, these appear to stem from a misaligned lens filter on the camera, rather than being something introduced at a later date.

**Audio:** The LPCM 1.0 mono soundtrack has also been cleaned up and offers crystal-clear dialogue alongside throaty motorcycle engine rumbles and swinging jazz numbers.

**Extras:** There's loads of great stuff to get stuck into here including an audio commentary, a fascinating account of the film's difficult history with the BBFC, the cut-down Super 8 version of the movie (with occasional narration to fill in the gaps) and one of the label's very best booklets to date.



## HCC VERDICT

### The Wild One: Limited Edition

→ Indicator → All-region BD & R2 DVD → £23

**WE SAY:** The boutique label does it again with a magnificent Blu-ray edition of this classic Brando flick.

Movie: ★★★★★

Picture: ★★★★★

Audio: ★★★★★

Extras: ★★★★★

OVERALL: ★★★★★

## Rita, Sue and Bob Too

BFI → Region B BD & R2 DVD  
£20



While Alan Clarke remains best known for his TV work, he also directed a trio of features for the bigscreen – the second of which was this bawdy 1987 comedy about two teenage schoolgirls having an affair with a married man. Ensuring that this disc measures up as a companion to its award-winning *Dissent & Disruption...* Alan Clarke Blu-ray boxset, the BFI has restored *Rita, Sue and Bob Too* from the original Super 16mm negative and the resulting 1.66:1-framed 1080p presentation is excellent. The Blu-ray also houses a superb new 68-minute retrospective doc and an extensive photo gallery.



## Hardcore: Limited Edition

Indicator → All-region BD & R2 DVD  
£23



Writer-director Paul Schrader's grubby 1979 thriller stars George C. Scott as a strict Calvinist father who

heads into the seedy underbelly of the L.A. porn scene to track down his missing teenage daughter. In a way, you could almost view it as a late '70s precursor to *Taken*, only the daughter chose to run away and the hero's 'particular set of skills' involve using his business acumen to pass himself off as a smutty movie producer. This BD partners an excellent 4K restoration with an engaging array of supplementary goodies.



## We are X: Limited Edition Steelbook

Manga → Region B BD  
£40



If this documentary struggles to convey just what it is that makes *kabuki*-styled rockers X-Japan and their brand

of soft metal so important to their fans, the band's unlikely history (involving cults, suicides and countless injuries) does at least make for an intriguing story for the uninitiated. Not that anybody who isn't already a die-hard fan will go anywhere near this Blu-ray given the outrageous price-tag. As it is, all that £40 buys you is a colourful 1.78:1 Full HD encode, a modest DTS-HD MA 5.1 soundtrack, a handful of extras and a pretty tin box. Hmm...







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# A legacy of horror

Universal celebrates four classic fright franchises with new boxsets, but can't help repeating itself again and again...

## → UNIVERSAL MONSTERS: COMPLETE LEGACY COLLECTIONS

From the Avengers to Transformers, Jedi Knights to the Knights of the Round Table, it often feels like every other film Hollywood puts out is either part of an established franchise or the first step in trying to create a brand-new one. But if you think this focus on sequels, spin-offs and shared universes is a fairly recent phenomenon, think again.

Following a handful of successful silent shockers during the 1920s, the next decade saw Universal become Hollywood's preeminent home of horror, starting with 1931's double-header of *Dracula* and *Frankenstein*. In the two decades that followed, the studio introduced even more fiends to scare audiences out of their hard-earned cash, including the Mummy, the Invisible Man and the Wolf Man.

However, it was 1935's *The Bride of Frankenstein* that would shape the future of the studio's horror output; ushering in an era of sequels that would see Universal's most successful monsters return from the grave again and again to keep on terrifying cinema-goers.

With its striking German expressionist sets, the underrated *Son of Frankenstein* (1939) sees Henry Frankenstein's son Wolf (Basil Rathbone) returning to the family castle and trying to reanimate the comatose Monster (a returning Boris Karloff) with the aid of the demented Ygor (Bela Lugosi). Ygor and the Monster (now played by Lon Chaney Jr.) returned

in the fairly run-of-the-mill *The Ghost of Frankenstein* (1942), with the duo seeking the aid of yet another 'son of Frankenstein' (Cedric Hardwicke's Ludwig) in an attempt to make a more peaceful Monster. Naturally, neither plan goes as hoped, and both films climax with the Monster on another rampage.

Unlike Frankenstein's Monster, Count Dracula took a little longer to return from the dead. In his place, audiences were introduced to *Dracula's Daughter* (1936), with Gloria Holden playing the vampiric Countess Zaleska. Picking up immediately after the climax of *Dracula*, this surprising sequel offers a more psychologically-nuanced take on the subject matter that feels akin to the B-movies Val Lewton would produce for RKO the following decade. Unfortunately, it wasn't what audiences wanted, and so the Count returned to the screen in the confusingly titled *Son of Dracula* in 1943. This time around Lon Chaney Jr. puts on the cape and adopts the cunning pseudonym Count Alucard for a bleak slice of Southern Gothic involving a Louisiana plantation and a death-obsessed heiress.

With 1932's *The Mummy* being little more than a *Dracula* do-over with Egyptian trappings, Universal opted to reboot things with *The Mummy's Hand* (1940). In place of Boris Karloff in old-age makeup, this time out we have the mummified Kharis (Tom Tyler), who is kept alive with sacred tana leaves and tasked with killing those who despoil the tomb of Princess Ananka. More than anything else, this was the film that really cemented the idea of an immortal bandage-clad mummy in the public consciousness.





*The Mummy's Tomb* (1942) sees Kharis (now played by... guess who? Lon Chaney Jr.) head to the US to kill the survivors of the previous film, while the rather dull *The Mummy's Ghost* (1944) adds a young girl who may be the reincarnation of Princess Ananka to the mix. The equally lacklustre *The Mummy's Curse* (1944) finds both Kharis and Ananka return from their swampy graves and shifts the action to Louisiana, ruining the continuity with the previous films in the process.

Before long, Universal's monsters weren't just staying put in their own sequels. 1943's enjoyable *Frankenstein Meets the Wolf Man* found the tragic Larry Talbot (Lon Chaney Jr.) from 1941's *The Wolf Man* brought back from the dead and searching for a cure for his lycanthropy, only to run into Frankenstein's Monster (Bela Lugosi).

1944's *House of Frankenstein* and 1945's *House of Dracula* take things even further as they continue the story, throwing together the Wolf Man (Lon Chaney Jr.), Frankenstein's Monster (Glenn Strange) and Count Dracula (John Carradine) in a pair of episodic, but lively multiple monster mash-ups.

Universal resurrected this terrible trio one last time for 1948's charmingly silly *Abbott and Costello Meet Frankenstein*, one of the comedy duo's better bigscreen efforts. Sadly, 1955's *Abbott and Costello Meet The Mummy* failed to recapture the magic of its predecessor and struggles to come up with even one truly memorable sequence.

Fans have been clamouring for these sequels to be released on Blu-ray ever since Universal Pictures unleashed its wonderful *Universal Monsters: The Essential Collection* boxset back in 2012. The solution it has come up with is a quartet of *Complete Legacy Collection* packages collecting together all of the appearances by a specific character.

However, as well as repeating films from the original 2012 boxset, the new Dracula, Frankenstein and Wolf Man Blu-ray bundles all include *House of Frankenstein*, *House of Dracula* and *Abbott and Costello Meet Frankenstein*, while the latter two sets also share *Frankenstein Meets the Wolf Man*. The Mummy boxset fares better, only sharing the original film with the 2012 package – and yet, ironically, this is the only one where all of the films have also been released simultaneously on separate Blu-rays.

With all of this in mind, we would recommend that fans would be best served picking up the



These four Blu-ray boxsets offer up a mix of gags, ghouls and Gothic chills



The treatment of *Werewolf of London* (above) could leave fans howling mad...

*Frankenstein* and *Mummy* sets for the moment. Providing you already have the original 2012 boxset, this will mean that you are only missing *Daughter of Dracula* and *Son of Dracula* from the new vampiric release, and the unconnected (but not entirely without merit) *Werewolf of London* (1935) and *She-Wolf of London* (1946) that the distributor has used to pad out the Wolf Man set. And presuming that Universal does for these sets what it has done with *The Mummy* and its sequels, you should hopefully be able to buy both pairs of films as standalone double-feature Blu-rays at some point in the future.

Or: if you don't care about doubling (or tripling)-up on some films, then look online and you can probably pick up these sets with around 40 per cent knocked off the official retail prices quoted below.

**Picture:** We'll take it as read that fans are already familiar with the Blu-ray presentations of *Dracula*, *Frankenstein*, *The Bride of Frankenstein*, *The Wolf Man* and *The Mummy*, as these are the same discs that appeared in the studio's 2012 boxset.

Based on a series of new 4K restorations, the various sequels look equally good. Even the decision to cut costs by squeezing two (or in one case, three) of the films onto a single platter doesn't cause any problems due to their fairly short lengths. The combined running times of *Frankenstein Meets the Wolf Man*, *House of Frankenstein* and *House of Dracula* is just 211 minutes – which is still 16 minutes shorter than *Lawrence of Arabia*.

The exceptions to the above are *Werewolf of London* and *She-Wolf of London*, which are based on older HD masters that still exhibit minor print damage as well as some stability issues.

**Audio:** All films feature DTS-HD MA dual-mono soundtracks and, for the most part, they've been cleaned up very nicely. The exception (once again) is *Werewolf of London*, which is not only beset by obvious background hiss and pops, but suffers from a striking drop in the volume level around the 56-minute mark.

**Extras:** The previously released films still sport all of their (superb) bonus features. Sadly, the newcomers fare less well, only offering up trailers – although *Son of Frankenstein* can't even manage this as the trailer was believed lost until very recently. At least *Abbott and Costello Meet Frankenstein* gets its own chat-track and featurette.

## HCC VERDICT

### *Dracula: Complete Legacy Collection*

→ Universal Pictures → All-region BD → £50

**WE SAY:** A handsome Blu-ray boxset, but repetition of films from the other sets may be a problem.

Movie: ★★★★★

Picture: ★★★★★

Audio: ★★★★★

Extras: ★★★★★

OVERALL: ★★★★★

## HCC VERDICT

### *Frankenstein: Complete Legacy Collection*

→ Universal Pictures → All-region BD → £50

**WE SAY:** The best of Universal's four new sets. Sure to put a smile on the faces of Franken-fans everywhere.

Movie: ★★★★★

Picture: ★★★★★

Audio: ★★★★★

Extras: ★★★★★

OVERALL: ★★★★★

## HCC VERDICT

### *The Mummy: Complete Legacy Collection*

→ Universal Pictures → All-region BD → £50

**WE SAY:** These films may be just as shambolic as their titular monster, but they still scrub up well in HD.

Movie: ★★★★★

Picture: ★★★★★

Audio: ★★★★★

Extras: ★★★★★

OVERALL: ★★★★★

## HCC VERDICT

### *The Wolf Man: Complete Legacy Collection*

→ Universal Pictures → All-region BD → £50

**WE SAY:** A lack of TLC regarding the presentation of the two exclusive films makes this set easy to pass up.

Movie: ★★★★★

Picture: ★★★★★

Audio: ★★★★★

Extras: ★★★★★

OVERALL: ★★★★★

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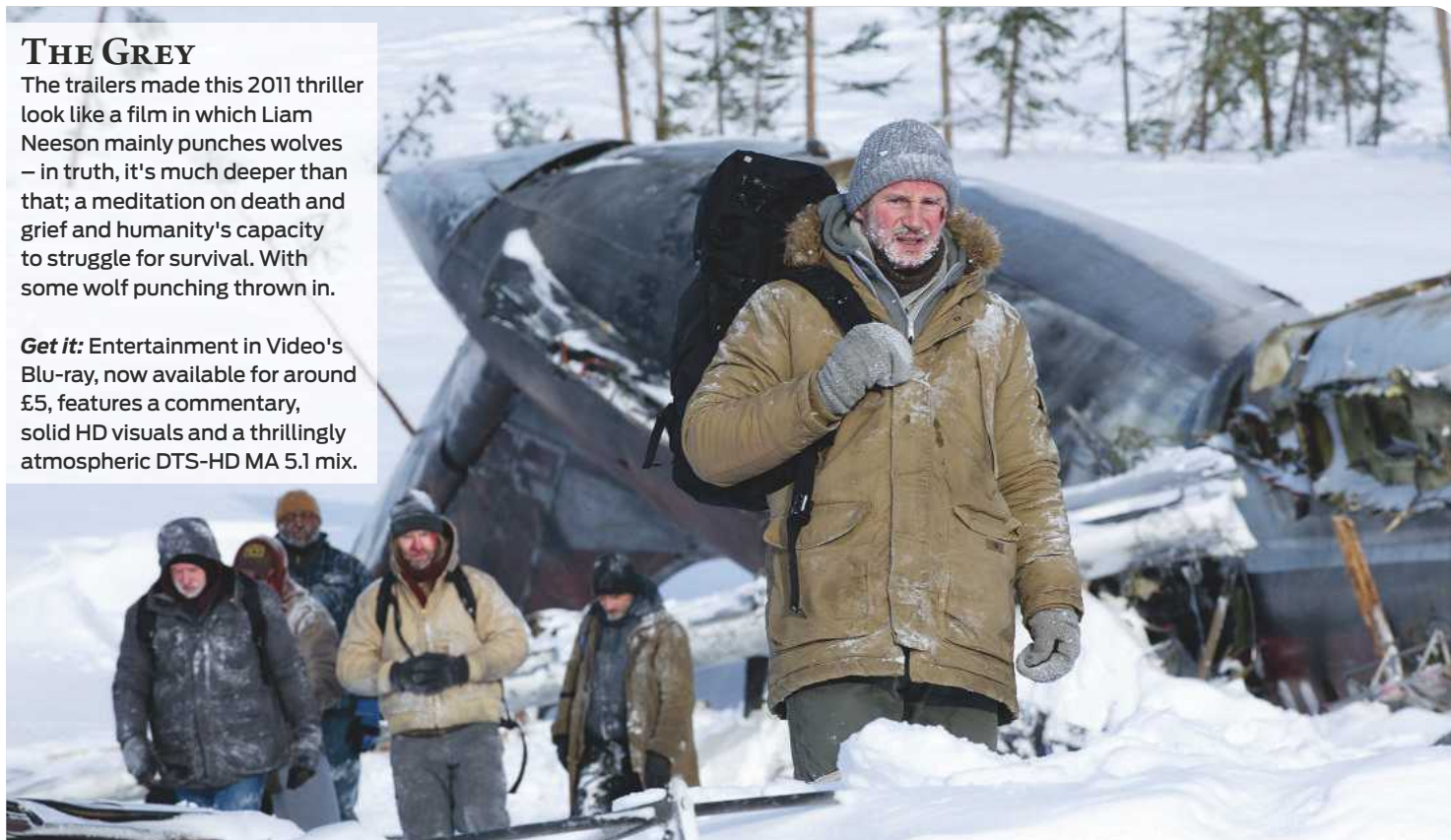
# Liam Neeson

Jedi Master. Vietnam veteran. CIA killer. Talking lion. **Team HCC** trawls the varied, 35-year career of this Oscar-winning Northern Irish actor to pick out his best moments

## THE GREY

The trailers made this 2011 thriller look like a film in which Liam Neeson mainly punches wolves – in truth, it's much deeper than that; a meditation on death and grief and humanity's capacity to struggle for survival. With some wolf punching thrown in.

**Get it:** Entertainment in Video's Blu-ray, now available for around £5, features a commentary, solid HD visuals and a thrillingly atmospheric DTS-HD MA 5.1 mix.



TOP PICK

## TAKEN

The 2008 movie that saw Neeson morph into a genuine action star, *Taken*'s story (written by Luc Besson) may be slight on nuance and heavy on violence, but as ruthless ex-CIA bod/angry father Bryan Mills, Neeson delivers a towering, visceral performance. A stupidly fun way to spend 90 minutes.

**Get it:** Various Steelbook versions are an option, plus a trilogy set that houses the two – unfortunately inferior – sequels. All, thankfully, feature the 18-rated 'Extended Harder Cut'.



## MICHAEL COLLINS

In Neil Jordan's 1996 period biopic, Neeson excels as the eponymous Irish republican leader and politician who played an integral role in the Irish War of Independence and the Civil War that followed. Matching his acting chops is Chris Menges' evocative, naturalistic cinematography and the time-spanning scope of Jordan's script.

**Get it:** Warner outed it on Blu-ray last year in a 20th Anniversary edition based on a new master. Extras include a detail-rich chat track from Jordan.



## ...THE LION, THE WITCH AND THE WARDROBE

Neeson lends his authoritative voice to Disney's big-budget, CGI-heavy *Chronicles of Narnia* adaptation (2005) as benevolent, knowing lion Aslan. He's an A-list presence amongst the film's mainly teenage cast, while his death/resurrection provides the movie's emotional core.

**Get it:** Available as a standalone BD or in Disney's *Chronicles of Narnia* boxset – but note the latter doesn't feature the 3D version of *...Voyage of the Dawn Treader*.



## KRULL

This 1983 mega-budget mega-flop counts Neeson amongst its cast of bandit heroes battling alien invaders on the planet Krull. A companion piece of sorts to '80s fantasy fare *Ladyhawke* and *Legend*, it's as mad as it sounds, and packs in everything from a James Horner orchestral score to a killer crystal spider.

**Get it:** Not yet available in the UK, *Krull* fans can import the Region A US release from Mill Creek Entertainment. Or hope that this cult title is picked up by a UK distributor eventually.





## THE A-TEAM

Perhaps not an obvious choice for the role of A-Team leader Hannibal Smith, but Neeson chomps cigars well and always looks like he's enjoying himself in this big, brash TV-to-movie adaptation from 2010.



**Get it:** The BD offers the theatrical cut and 'Extended Explosive Edition'. Both only warrant a '12' rating – the disc's '15' certificate relates to the director's commentary. Sizzling image and sound quality.



## RUN ALL NIGHT

Our pick of Neeson's team-ups with director Jaume Collet-Serra (see also *Unknown* and *Non-Stop*), this kinetic 2015 New York crime thriller wraps up its mob hitman shenanigans around a thoughtful tale of two best friends (Neeson and Ed Harris) pitched against each other by the actions of their sons. It careers along at breakneck speed, with Neeson a steady figure amongst the mayhem.

**Get it:** The Blu-ray suffers from meagre extras, but makes up for it with an immersive DTS-HD MA 7.1 soundmix.



## BATMAN BEGINS

Anyone who thought Christopher Nolan's 2005 superhero origin story would be a straightforward affair with a bit of The Joker thrown in didn't reckon on writer David S. Goyer trawling the Bat archives and digging up martial arts crazy Ra's al Ghul. The result was a memorably menacing role for Neeson and a refreshingly dark story after the day-glo calamity of *Batman Forever*.

**Get it:** Warner has been plucking archive titles for UHD releases, but has so far ignored its highly-regarded Dark Knight trilogy. Currently the Blu-ray boxset is your best option.



## SCHINDLER'S LIST

Neeson was nominated for (but didn't win) an Academy Award for his portrayal of Nazi-turned-Jewish sympathiser Oskar Schindler. Steven Spielberg helms this masterful and harrowing three-hour drama, opting to shoot in black-and-white (mostly) and eschewing grand camera sweeps to create a more documentary-style sense of realism.

**Get it:** Universal waited until the film's 20th anniversary in 2013 to release the film on Blu-ray, with Spielberg approving the film-to-digital transfer. The result is a stunning-looking encode.

## STAR WARS - EPISODE I: THE PHANTOM MENACE

George Lucas' second *Star Wars* trilogy has its critics, but no one laments the casting of Neeson as Jedi master (and Obi-Wan Kenobi's mentor) Qui-Gon Jinn in the opening instalment (1999). The biggest role of Neeson's career to date saw him don a brown cloak, lightsaber and flowing locks, and he proves the perfect choice for a role that has to follow in the footsteps of the great Alec Guinness.

**Get it:** Why get this good-looking Blu-ray on its own when it can be enjoyed as part of *The Complete Saga* boxset with its five sequels/prequels? Just don't search for the 3D conversion – that only played at cinemas and remains AWOL on disc.



Have we missed one of your favourite Liam Neeson roles?  
Let us know: email [letters@homecinemachoice.com](mailto:letters@homecinemachoice.com)



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Issue No.262



Issue No.263



Issue No.264



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# SELECT

→ **GEAR GUIDE** **TELEVISIONS** From entry-level 40in LEDs to flagship 4K monsters  
**BLU-RAY PLAYERS** Which deck rules the roost? **PROJECTORS** It's time to blow up your video!  
**AV RECEIVERS** 5.1, 7.1, 11.2 – we've got all the options covered **SPEAKERS** Killer surround sound setups  
for all rooms and budgets **PVRs** Including super-slim Freeview boxes and Sky Q **AND MORE!**

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FOR A NEW  
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Our **Top 10**  
guide is here  
to help

## HCC RATINGS KEY...

Outstanding	★★★★★
Above average	★★★★☆
Acceptable	★★★☆☆
Disappointing	★★★☆☆
Dire	★★★☆☆

All prices quoted are approximate and may have changed

## TOP 10 Televisions

**Sony KD-65ZD9** → £3,500

★★★★★

Sony finished 2016 on a high with this full-array LED Bravia (with advanced local dimming tech) that claims a 1,800-nit peak brightness. Cinematic, sublime pictures – and Dolby Vision support is a firmware update away. *HCC #267*

**Panasonic TX-65DX902** → £2,300 ★★★★★

This HDR-capable 65-incher wears its Ultra HD Premium badge with pride, and employs a full-array backlight to take control of its impressive luminance talents. Imagery is excellent. *HCC #259*

**Philips 55POS901F** → £2,800 ★★★★★

Philips enters the OLED arena with a screen that stands out courtesy of its alluring performance and Ambilight. But it lacks the smart skills and 3D playback of some rivals. *HCC #270*

**Samsung QE65Q9F** → £4,900 ★★★★★

This premium 'QLED' screen outguns rivals when it comes to brightness and visual impact. Routinely stunning, but edge LED lighting has some niggles. No 3D or Dolby Vision. *HCC #273*

**Sony KD-55XE9005** → £1,700 ★★★★★

Sony brings direct LED illumination to the 55in arena. Still not an absolute HDR knockout (local dimming isn't foolproof) but generally this is a good-looking set for the AV everyman. *HCC #272*

**Samsung UE55KS7000** → £1,000 ★★★★★

Straddling the world between budget sets and more premium competitors, this 2106 model retains its appeal. Impressive with both SDR and HDR. *HCC #265*

**Sony KD-55XE9305** → £2,400 ★★★★★

This Android 4K LED model hits the highs when it comes to brightness and colour impact, leading to some stellar HDR visuals. Yet the edge LED lighting shows some flaws. *HCC #271*

**Panasonic TX-50DX750** → £800 ★★★★★

Mid-range 4K/HDR LED TV. Not as impactful as its DX902 stablemate when it comes to pictures, but a neat design, fun UI and appealing screen size will win it plenty of fans. *HCC #260*

**Hisense 75M7900** → £2,500 ★★★★★

A massive 75in LED set at a bargain price. The appeal is its largescreen 4K playback: a lack of innate brightness and colour subtlety hampers HDR performance. *#267*

**Hitachi 49GHT69U** → £500 ★★★★★

49in 4K screen that could appeal to those on tight budgets. This £500 set offers a smattering of catchup, decent connectivity and a generally enjoyable image. No HDR support, though. *HCC #260*

## TECH INFO: TELEVISIONS



**4K is here to stay:** The TV market is currently dominated by LED-lit LCD screens – plasma is long gone – but OLED is gaining a share as more brands adopt the self-emissive screen technology. 4K/Ultra HD models are now commonplace on displays above the 40in mark, which is where you should be looking for home cinema thrills. Curved models were once achingly trendy, but we're seeing a shift away from such design flourishes. Look out for sets offering support for HDR content, which is part of the UHD Blu-ray specification.



**Active or Passive:** At the beginning of the 3D era, most TVs featured the active system that uses powered 3D specs to deliver full-res images to each eye. Passive 3D TVs, which are now more common, have a filter over the screen and use non-powered specs with polarising filters. The glasses are cheap as chips, but the resolution of Full HD 3D is halved to 540 lines horizontally (but remains at 1,920 vertically). The same halving occurs with a 4K screen. 3D playback is increasingly being dropped by brands (including Samsung and Philips). Glasses-free 3D, heralded by Toshiba's early ZL2 TV, hasn't caught on. The tech is still being worked on, though...

## TOP 5 Blu-ray movies

**Rogue One: A Star Wars Story**

This stonking new addition to the *Star Wars* universe is a Force to be reckoned with on Blu-ray thanks to its electrifying 2.40:1 1080p visuals and reference-quality DTS-HD MA 7.1 sonics.

★★★★★

**Fantastic Beasts and Where to Find Them [Ultra HD Blu-ray]**

Warner's lively Harry Potter spin-off/prequel conjures up spellbinding 4K HDR imagery, accompanied by a playful Atmos audio mix.

★★★★★

**Hacksaw Ridge**

Mel Gibson's enthralling real-life World War 2 story explodes onto Blu-ray with dazzlingly detailed 2.40:1 Full HD visuals and one of the most impactful Dolby Atmos soundtracks you'll ever hear. The extras are well worth a look, too.

★★★★★

**Deepwater Horizon [Ultra HD Blu-ray]**

Tense, explosive 'docbuster' that reunites Mark Wahlberg with *Lone Survivor* director Peter Berg. Lionsgate's 4K disc offers a breathtaking Atmos soundtrack and flaming HDR visuals.

★★★★★

**Moana**

Disney's seafaring adventure makes an almighty splash on Blu-ray with richly saturated 2.40:1 1080p imagery and bass-rich DTS-HD MA 7.1 soundtrack. AV prowess is backed up by a typically strong set of extras.

★★★★★



# TOP 10 Blu-ray & Ultra HD Blu-ray players

- 1**  **Oppo UDP-203 → £650** ★★★★★  
 Oppo refreshes its player hardware with a superb universal design with Ultra HD playback (including Dolby Vision via firmware later this year). Packed with user adjustments and connectivity. No apps or Darbee Vision, though. *HCC #269*
- 2**  **Panasonic DMP-UB900 → £600** ★★★★★  
 The Ultra HD Blu-ray format got an inspiring debut in Panasonic's multi-talented deck that offers a sterling picture performance and 4K-enabled VOD apps. *HCC #259*
- 3**  **Pioneer BDP-LX88 → £1,100** ★★★★★  
 The Japanese corp returns to the disc-playing high-end with a universal deck that weighs more than your AVR and drips with user tweaks and processing features. Stonking performer. *HCC #246*
- 4**  **Panasonic DMP-UB700 → £300** ★★★★★  
 Shorn of some of the audiophile niceties of the UB900 (including multichannel analogue outputs), but still a safe pair of hands with your 4K BDs. And at a bargain price. *HCC #270*
- 5**  **Sony UHP-H1 → £400** ★★★★★  
 Its last top-line BD deck before Sony embraces UHD, this player pleases with wide-ranging audio support (including DVD-A!), exquisite construction and slick performance. *HCC #261*
- 6**  **Arcam FMJ UDP411 → £1,200** ★★★★★  
 Pristine visuals – including upscaled SD – and a classy sonic performance grant this Arcam instant appeal. The design and build is commensurate with the premium price tag. *HCC #244*
- 7**  **Panasonic DMP-UB300 → £240** ★★★★★  
 Great 4K imagery from this bargain deck, but you might prefer to up your budget for the UB700 – no split HDMI, optical/coaxial or Wi-Fi connections here. Half-size design. *HCC #272*
- 8**  **Samsung UBD-K8500 → £350** ★★★★★  
 Ultra HD Blu-ray player that'll find fans courtesy of its sensible price point, connected smarts and eye-catching visuals. Build quality is a little uninspiring. *HCC #260*
- 9**  **LG BP556 → £85** ★★★★★  
 LG's top-of-the-line(!) disc-spinner is actually a budget offering. Design is a bit garish, but the addition of multiroom streaming, some smart apps and file playback sweeten the deal. *HCC #266*
- 10**  **Samsung BD-J7500 → £150** ★★★★★  
 This well-priced spinner offers twin HDMI outputs and multichannel phono audio for flexible system hookup, an appealing design, smart features and solid AV chops. *HCC #247*

## TECH INFO: BLU-RAY PLAYERS

**Matching your deck to your AV receiver:** Blu-ray decks are designed to deliver top-notch images but Blu-ray is also about enjoying superior quality sound. When choosing a player, bear in mind the connectivity and decoding features of your AV receiver. If you're still using an older model that doesn't offer HDMI inputs, then you'll need a Blu-ray player with multichannel analogue audio outputs to enjoy decoded hi-res surround sound formats. Similarly, older but still HDMI-equipped receivers may not be able to cope with 3D/4K/HDR output signals, in which case you'll need a deck with dual HDMI outputs – one channelling audio to your receiver amp, the other piping video direct to your TV.

**What about consoles?:** Both Sony's PlayStation and Microsoft's Xbox platforms support Blu-ray playback – the latter's Xbox One S will even spin your Ultra HD Blu-ray platters. Using a console can be an affordable alternative to a deck, particularly when gaming and media playing talents are taken into account, but the joypad user experience can feel a little odd and you'll need to make sure no one else is playing *Grand Theft Auto* first.



## DEMO DELIGHT

**Billy Lynn's Long Halftime Walk:** Ang Lee's post-Gulf War drama isn't exactly a cracking film, but as the world's first 60fps 4K Blu-ray title it gives you a chance to sample high-frame-rate home cinema. Will you like it? That's not for us to say...

OPPO®  
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## TOP 10 Projectors

**Sony VPL-VW550ES** → £9,000

★★★★★

For its top-range domestic SXRD beamer, Sony introduces an HDR Contrast tool that proves useful in fine-tuning its UHD Blu-ray performance. Excels with standard BD content and setup flexibility, too. *HCC #269*

**JVC DLA-X7000** → £5,700 ★★★★★

With contrast and brightness improvements over the more affordable DLA-X5000, this is a great bigscreen option, although its SDR performance impresses more than HDR. *HCC #259*

**Sony VPL-HW45ES** → £1,850 ★★★★★

The most affordable model in Sony's home cinema range, the Full HD-resolution 45ES features excellent light management for a routinely cinematic image. Great value. *HCC #263*

**Epson EH-TW6700** → £1,300 ★★★★★

HDR and 4K scaling are off the menu, leaving this mid-range model to concentrate on cinematic HD images. Bright, crisp performance, plenty of tweaks, but no 12V trigger. *HCC #271*

**Acer V9800** → £4,000 ★★★★★

This 4K DLP offers wonderful clarity and bright HDR peaks via its 2,200 Lumens lamp. Black levels aren't the best, but the price here feels about right for a debut technology. *HCC #272*

**ViewSonic Pro7827HD** → £600 ★★★★★

Pictures impress from this single-chip DLP budget option that carries a third HDMI input designed for smart sticks. Includes ISF calibration. 3D spex are an optional extra. *HCC #261*

**Epson EH-TW9300** → £3,000 ★★★★★

Epson brings HDR playback and 4K up-rezzing to an agreeable price tag. Colourful and well-contrasted visuals, but don't expect an HDR knockout. *HCC #266*

**Epson EH-TW7300** → £2,200 ★★★★★

Similar performance traits to its bigger brother (above), but with reductions in max brightness (and claimed contrast). Currently the most affordable HDR model around. *HCC #269*

**Optoma GT5000** → £1,000 ★★★★★

Ultra short-throw model with healthy brightness that makes sense for regular living rooms where a traditional install isn't possible. Casts Full HD images from just 30cm. *HCC #261*

**BenQ W2000** → £800 ★★★★★

Average black-level performance limits this model's all-round appeal, but elsewhere this Full HD DLP budget PJ catches the eye with its calibration options and detailed visuals. *HCC #257*

## TECH INFO: PROJECTORS



**Installation:** Although projectors can be temporarily placed on a cupboard, stand or shelf situated at the rear of the room (use the adjustable feet on its base to level the image so that it aligns with the screen), a much better long-term solution is to mount it on your ceiling with an appropriate bracket. Projectors can be quite heavy, though, so it's important to ensure that the bracket is attached firmly – ideally, it should be secured to a joist. Position your PJ so that an imaginary line from its lens to the opposite side of the room hits the screen exactly half-way along its width. The location of your screen should therefore dictate where your projector is. A decent tape-measure or laser pointer will help you to determine the position.

**Throw distance:** Throw distance specifies the distance between the projector and screen for a focused image of given size. As the vast majority of projectors are equipped with a zoom lens, minimum and maximum throw distances are often specified – say, 3.01m to 6.08m for a 100in. 16:9 image. Shorter throw distances are ideal for smaller rooms, and longer ones for larger rooms. Simple.

**Throw ratio:** Sometimes, a manufacturer will quote a throw ratio rather than a throw distance. This is basically the throw distance divided by the image width. To get the projected image size, divide the distance between projector and screen by the specified figure. Once again, the inclusion of a zoom lens means that upper and lower figures are usually specified.

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## TOP 10 Speakers



### 1 Monitor Audio Gold 300AV → £7,150



MA revamps its Gold Series and we pay serious attention. This big-ticket package excels across the frequency range, offers exquisite design and packs setup flexibility via the dipole/monopole FX surrounds. HCC #251



### 2 Q Acoustics 3000 5.1 Cinema Pack → £700 ★★★★★

A superior compact package with driver improvements over the previous 2000i series. The two-way cabinets and dual-driver sub combine to offer impressive audio for the money. HCC #247



### 3 KEF R Series 7.1 → £6,500 ★★★★★

A 7.1 array mixing dipolar and direct surrounds, this authoritative package takes its cues from KEF's Blade concept speaker and offers faultless, largescale home cinema sonics. HCC #217



### 4 Monitor Audio Bronze B5 AV → £1,500 ★★★★★

Like their Gold siblings, these feature switchable surround speakers and MA's C-CAM drivers. Smaller in stature and output, but eminently more affordable. HCC #254



### 5 ELAC Debut 5.1.2 → £1,950 ★★★★★

Well-priced floorstanding Atmos system that manages to balance subtlety and precision with an exciting delivery. Subwoofer includes app-based room EQ. HCC #262



### 6 DALI Opticon 5.1 → £3,200 ★★★★★

The Opticons employ driver designs created for DALI's higher-end models, and showcase a talent for both involving music presentation and high-octane home cinema. HCC #260



### 7 Polk Signature Series 5.1 → £1,450 ★★★★★

Impressively largescale performance from a well-priced floorstanding system with slimmed-down centre enclosure. Upfront and boisterous sound; a great entertainer. HCC #273



### 8 Dynaudio Emit 5.1 → £3,200 ★★★★★

Entry-level for Danish brand Dynaudio – still a hefty chunk for a 5.1 array. What the money gets you is a wonderfully natural and cohesive soundstage and stonking build quality. HCC #263



### 9 Wharfedale DX-ISE → £400 ★★★★★

Delightfully compact 5.1 package (although with two-way satellite speakers) that blends a tidy design with crisp surround sonics at a very tempting price. HCC #267



### 10 Quad S Series 5.0 → £1,800 ★★★★★

Standmount speakers with ribbon tweeters join together in a multichannel pack with a smooth, detailed and unfatiguing sound. Neat design and build. Just add a subwoofer. HCC #271

## TECH INFO: SPEAKERS



**Centre speaker:** Handles most of the dialogue and onscreen effects. Should be positioned above or below the screen as close to it as possible. Of course, if you're using a projector screen, it should ideally be placed behind it.

**Front speakers:** Left and right speakers should be positioned either side of the screen, in line with the centre. Turn the speakers in slightly to face the listener if there isn't an even movement of sound across the front of the room.

**Subwoofer:** Can be positioned wherever it sounds best or can be tucked out of sight due to the non-directional nature of low-frequency signals. Be aware that close positioning in corners or next to walls can create a boomy effect.

**Surrounds:** Position alongside the listener, pointing in or slightly behind the ears for a good surround effect. The back wall is not a good position for surrounds – it is, in fact, where you should locate the sixth and seventh speakers (rears) in a traditional 7.1 array.

## DEMO DELIGHT

**Arrival:** No object-audio here, but this DTS-HD MA 7.1 track is a reminder of how brilliant a 'flat' mix can be. From the shaking lows of moving spacecraft to the soaring strings of Max Richter's instrumental track *On The Nature of Daylight*, there's fidelity in spades, and the sound design is packed full of location-setting ambience. Awesome.

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Photo courtesy of Gary J.Fernandez

## TOP 10 AV Receivers/AV Processors

**Anthem MRX 1120** → £4,000

★★★★★

Combining Anthem's superb ARC room EQ system with 11-channel amplification makes this an essential consideration for full-spec Atmos setups. Muscular, precise sound. No networking skills, though. *HCC #265*

**Arcam AVR850** → £4,500 ★★★★★

High-end seven-channel AVR marrying Class G amplification and Atmos (and future DTS:X) support with talented Dirac Live Room EQ. 11-channel pre-outs for full-fat setups. *HCC #257*

**Denon AVR-X4300H** → £1,300 ★★★★★

Nine-channel receiver with HEOS multiroom integration and 11-channel processing (Atmos, DTS:X, plus Auro-3D as a paid-for upgrade). Great, detailed sound and foolproof usability. *HCC #267*

**Trinnov Audio Altitude32** → £27,000 ★★★★★

Capable of outputting 32 discrete channels and mapping Dolby Atmos, DTS:X and Auro-3D sources to any setup via advanced EQ. Only premium cinema owners need apply, though. *HCC #262*

**Denon AVR-X2300W** → £500 ★★★★★

This almost entry-level Denon offers excellent value for money, with a well-balanced sound signature and bulging feature set. Seven-channel design won't suit all setups. *HCC #263*

**Yamaha RX-A3060** → £2,000 ★★★★★

New nine-channel flagship from Yamaha features excellent room EQ implementation, well-judged DSP modes, and an even-handed, effortless sound. *HCC #264*

**Denon AVR-X6300H** → £2,000 ★★★★★

Denon bundles 11 channels of power, plus cutting-edge features, into this crisp, articulate AV receiver. Ideal partner for 7.1.4 setups, but not quite the muscle-monster you might expect. *HCC #269*

**Marantz NR1607** → £600 ★★★★★

The latest slim-line AVR from Marantz continues the brand's good work when it comes to space-saving sonics. Seven-channel amp with object-based audio. Punchy, lively sound. *HCC #266*

**Pioneer VSX-1131** → £550 ★★★★★

Seven-channel model with Atmos and DTS:X support that features an overhauled remote control and UI to improve usability. Bass-rich, energetic sound. *HCC #265*

**Yamaha RX-A860** → £900 ★★★★★

Only seven channels and hindered by only three HDCP 2.2-enabled HDMI inputs, but beyond that this flexible MusicCast AVR proves a great listen, with plenty of DSP toys. *HCC #270*

## TECH INFO: AV RECEIVERS



**Tackling new heights:** A recent innovation in AVR circles is the introduction of Dolby Atmos, the object-based sound format that has taken off in commercial cinemas and is supported in the home by the likes of Onkyo, Pioneer, Denon, Marantz and Yamaha. This requires new height speakers in addition to a regular 'flat' 5.1 or 7.1 speaker configuration. The heights can either be physically mounted in/on your ceiling, or provided via up-firing reflective models. Setup can be complex, but the results are certainly impressive. Atmos-encoded Blu-rays are a bit thin on the ground, but you can use Dolby Surround post-processing with regular 5.1/7.1 soundtracks to get the most from your new AVR/speakers. Rivals to Atmos are Auro-3D, which uses height speakers in a different configuration, and DTS:X. Most AVR brands have pledged support for the latter; software isn't as widespread as Atmos.

**How much power?:** Many of the mass-market AV receiver manufacturers are involved in a specifications race to see who can say their model is the most powerful, which can be confusing for consumers. For instance, both Krell's £7,000 S-1500 seven-channel power amp and Yamaha's £500 RX-V675 both claim 7 x 150W – the important part is that Krell's figure is into an eight-ohm load with all channels driven, and that Yamaha's is with one channel into a four-ohm load, which is hardly a real-world situation. The best advice is ignore the numbers game and get a demo of your desired AVR with the same, or similar, speakers that you intend to partner it with.

## TOP 5 Bonus features

**Sam Peckinpah: Man of Iron – The Director's Cut**

Arrow Video bolsters its *Bring Me the Head of Alfredo Garcia*: Limited Edition Blu-ray with over 10 hours of extended interviews shot for Paul Joyce's fascinating TV doc about the film's director.

★★★★★

**Star Wars: The Force Awakens commentary**

Director JJ Abrams provides a trivia-packed chat track on the Collector's Edition Blu-ray release of Disney's box office killer. Indispensable for *Star Wars* geeks.

★★★★★

**Napoleon: Triptych**

On a package that also features a remarkable five-hour commentary track, the option to watch the movie's three-panel footage on three displays (via three discs) is the icing on the cake.

★★★★★

**The Giant's Dream**

Superior hour-long documentary on *The Iron Giant*'s Signature Edition Blu-ray that is refreshingly honest about the toon's production and its now-famous box office failure. Brilliant stuff.

★★★★★

**You're so cool, Brewster!**

Fan-pleasing 147-minute retrospective *Fright Night* documentary (edited down from an original much-longer crowd-sourced movie) featuring exclusive interviews and plenty of production nuggets.

★★★★★



# TOP 10 Subwoofers

- 

**SVS SB-2000** → £600 ★★★★★  
This follow up to the SB-1000, which incorporates a new 12in driver and revamped Sledge DSP amplifier, offers immense value for money. A mid-sized woofer that imbibes your Blu-rays with potent LFE, the SB-2000 sounds quick and taut, and is a perfect introduction to what a truly good sub can accomplish. *HCC #233*
- 

**REL No.25** → £6,500 ★★★★★  
REL celebrates its 25th anniversary in style with this 15in/1,000W premium concoction that exhibits exhilarating speed and nuance down to serious depths. Big, but beautiful. *HCC #271*
- 

**JL Audio Fathom f121v2** → £6,500 ★★★★★  
A second-gen outing for JL's 2 x 12in monster, with an increase in power (now 3,600W) and improvements to the room EQ system among the changes. Sounds as good as you'd imagine. *HCC #261*
- 

**SVS SB16-Ultra** → £2,500 ★★★★★  
A big driver (16in) and 1,500W amp combine to give SVS's flagship sealed sub real appeal. Goes low while sounding tight and fast. App-assisted EQ and operation. *HCC #270*
- 

**REL S/3 SHO** → £1,450 ★★★★★  
The 10in, 400W S/3 is part of REL's revamped 'Super High Output' Serie S line. Performance is excellent, with speed, control and a scale bigger than you might expect. *HCC #264*
- 

**BK Electronics P12-300SB-DF** → £475 ★★★★★  
Bass heads can get outrageous value for money in the shape of BK's overperforming 12in sub. A front-firing model is also offered, and other finishes knock the ticket down to sub-£400. *HCC #247*
- 

**Eclipse TD520SW** → £3,000 ★★★★★  
This twin 8in woofer, driven by ICEpower amplification, aims for ultimate speed and tone – and succeeds. Simply put, the TD520SW is worth every penny of its asking price. *HCC #249*
- 

**GoldenEar SuperSub X** → £1,450 ★★★★★  
Four drivers (two active, two passive) squeezed into a relatively compact design and given plenty of push from a 1,400W amp. Standout traits are impact and depth. *HCC #272*
- 

**SVS PC-2000** → £800 ★★★★★  
The cylinder construction means this 12in, 500W design can boast a large cabinet but a relatively small footprint. Good value with weighty, slamming bass, but a little lacking in nuance. *HCC #267*
- 

**Artison Nano 1** → £800 ★★★★★  
Artison's media room-friendly woofer tucks twin 6.5in bass drivers and a 300W amp into its compact frame. Bass extension isn't the deepest, but this is tight, fast and heaps of fun. *HCC #253*

## TECH INFO: SPEAKERS



**Why use more than one sub?:** Using two subwoofers (or perhaps four) should, in theory, bring huge rewards in terms of bass performance. But remember that LFE is a tricky beast to control. Running two subs may simply double problems in your room like room boom and suck-outs, where outgoing and reflected bass sounds cancel each other out. If you have some flexibility in where you place subwoofers, trial and error may well throw up some interesting results. The acoustics wizard Floyd E Toole (his book *Sound Reproduction: The Acoustics and Psychoacoustics of Loudspeakers and Rooms* is fine bedtime reading) suggests one LFE sub to either side of the room may be best for accuracy while placing them in the front corners would be best for overall bass power. Yet there is no hard and fast rule as to what will work best for every room, and you may find that simply using one (large) subwoofer is preferable as it's the easiest to get sounding right.

## DEMO DELIGHT

**Rogue One: A Star Wars Story:** Another cracking DTS-HD MA 7.1 soundmix from Disney for one of its crown jewels, and – as with *...Force Awakens* – there's LFE aplenty. Largescale moments like the destruction of Jedha are blessed with rolling, heaving, show-stopping bass, while every blast, thud and boom of the Scarif showdown carries believable weight. Not too OTT, but not afraid to shake the rafters, either.

# TOP 5 Console games



## Call of Duty: Infinite Warfare

The sci-fi trappings may upset COD purists, but this is one of the series' best entries in years. The action-packed single-player campaign is a blast; multiplayer extends the fun.

★★★★★



## Resident Evil 7: Biohazard

Moving from the familiar third-person perspective to a first-person view was always going to be a risk, but it pays off here with a terrifying return to the series' roots. PS4 Pro owners get enhanced resolution visuals.

★★★★★



## Gears of War 4

A thrilling continuation of the Xbox action stalwart, with an absorbing, well-scripted single-player campaign and wonderfully colourful and vibrant visuals (with HDR on Xbox One S). Give it a spin!

★★★★★



## Horizon Zero Dawn

*Tomb Raider* meets *Zelda* in this PS4-exclusive action-adventure pitting humans against massive mechanical beasts. Excellent gameplay, and the 4K visuals are perhaps the best reason yet to upgrade to a PS4 Pro.

★★★★★



## The Legend of Zelda: Breath of the Wild

Nintendo has given its new Switch console the best start possible with this audacious and imaginative open-world addition to its ever-popular action-RPG series. A real treat.

★★★★★

## TOP 10 Accessories

- 1 KEF R50 → £600 ★★★★★**  
 KEF's Dolby Atmos-enabled reflective modules are a smart choice for anyone looking to beef up their speaker system. Using the company's Uni-Q point source drivers pays real dividends, enabling full-range sonics that reach deep into your cinema room. Styling and build quality are first rate. £600 gets you a pair – you'll soon want four... *HCC #252*
- 2 Amazon Echo Dot → £50 ★★★★★**  
 Less impressive as a standalone speaker than its larger sibling, but a third of the price, and its 3.5mm output lets it work with third-party kit. Fun AI experience, and a real bargain. *HCC #269*
- 3 Nvidia Shield Android TV → £180 ★★★★★**  
 The Android-based streamer/gaming box gets a gentle revamp – same silicon, neater design, new features including future support for Google Assistant. Slick and easy to use. *HCC #272*
- 4 Amazon Fire TV → £80 ★★★★★**  
 Media streamer with impressive search functionality and plenty of content, including 4K Netflix and Amazon Video. HDR support would be nice, though. *HCC #270*
- 5 Logitech Harmony Elite → £270 ★★★★★**  
 Flexible and relatively easy to set up, this all-in-one remote package combines touchscreen handset and hub with smart device app. Worthwhile if you have a stacked kit rack. *HCC #256*
- 6 Devolo Wi-Fi ac Repeater → £50 ★★★★★**  
 Simple plug-based add-on that extends the range of your Wi-Fi network, and offers hardwired access. Could be just the ticket for your loft-based movie room. *HCC #269*
- 7 Xbox One S → From £250 ★★★★★**  
 The retooled Xbox One adds Ultra HD Blu-ray playback, 4K streaming and HDR gaming to the feature list. Available in 500GB/1TB/2TB versions. *HCC #264*
- 8 PSB Imagine XA → £350 ★★★★★**  
 These two-way Dolby Atmos-enabled upfiring speakers are fairly chunky, but work well at creating a height layer and the £350-per-pair ticket makes them an enticing option. *HCC #264*
- 9 DVDO iScan Mini → £275 ★★★★★**  
 HDMI 4K upscaler (using Silicon Image's VRS processing) that teases sharpness from HD and SD sources. A good fit for an entry-level or mid-range 4K TV. *HCC #264*
- 10 Sony PlayStation 4 Pro → £350 ★★★★★**  
 A mid-cycle upgrade of Sony's console brings 4K and HDR gaming, plus app streaming, but not UHD BD playback. Gorgeous gameplay is the USP here. *HCC #268*

## TECH INFO: MEDIA PLAYERS



**What about my TV?:** Most flatscreen TVs from the major brands (Sony, Samsung, Panasonic, LG, Philips, Hisense, etc) also incorporate media player functionality, using Ethernet or Wi-Fi to stream from your home network, or from plugged-in USB drives. Most modern Blu-ray players offer this, too. However, file support is rarely as extensive as on dedicated devices from the likes of Western Digital and A.C. Ryan, and our experience shows some are more adept at playback from USB than over a network. Nor (obviously) is a TV or BD player portable. If your media collection extends beyond JPEGs and MP3s into lossless audio rips and esoteric HD video formats, then a standalone player is a good investment.

**Storage:** You can, if you really want, store all your files on a plethora of USB drives, or on your PC, but it's best to get a NAS (Network Attached Storage) device for simplified sharing of your media across a network with



multiple players, such as one from Netgear's ReadyNAS range (pictured). These dedicated devices often offer RAID array file backup, and are managed via browser software. Storage capacity can be anything from 1TB to 12TB and beyond.

## TOP 5 Blu-ray/DVD boxsets


**Planet Earth II [Ultra HD Blu-ray]**

Intricately detailed and radiating HDR brilliance, this dazzling 4K outing for the BBC's acclaimed natural history series needs to be seen. And you'll learn a lot about furry critters, too.

★★★★★


**Doctor Who: The Power of the Daleks**

Unseen since 1966, this missing BBC serial has been recreated using animation – with the choice of colour or black-and-white incarnations – and packs a TARDIS-load of extras.

★★★★★


**Phantasm 1-5: Limited Edition**

A must-own for fans of the cult film franchise, this epic six-disc boxset delivers impressive HD presentations of all five fright flicks alongside a cornucopia of new and archival bonus goodies.

★★★★★


**Dissent and Disruption: Alan Clarke at the BBC (1969-1989)**

Mega boxset with a mega price tag (£150) featuring a comprehensive collection of Clarke's work spread across 11 BDs and two DVDs.

★★★★★



**The Hunger Games: The Complete 4-Film Collection**


Ultra HD package with pleasingly crisp 2.40:1 encodes, new Dolby Atmos mixes for the first two movies and a bulging collection of extra features.


★★★★★





## TOP 10 Soundbars & Soundbases


- 


**Yamaha YSP-5600SW** → £1,900 ★★★★★  
 With its 46 drivers (including upfiring) this premium 'bar delivers precisely-steered and immersive audio, even of the Atmos variety. Potent wireless sub and 4K-capable HDMI switching sweeten the high-end deal. *HCC #254*
- 

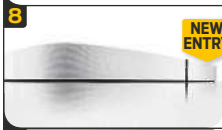
**Canton DM55** → £330 ★★★★★  
 Canton's smallest soundbase still delivers big sonic thrills. Twin woofers underpin clean and crisp mids and highs, and build quality is first-rate. Doodle to use. Bluetooth built-in. *HCC #260*
- 


**Samsung HW-K950** → £1,300 ★★★★★  
 Soundbar with additional wireless rears and Dolby Atmos support via four upfiring drivers. Impressively largescale performance, good connectivity. No native DTS support. *HCC #263*
- 


**Samsung HW-MS650** → £600 ★★★★★  
 Superior signal processing and a ground-up design make Samsung's subwoofer-free soundbar thrillingly impressive with movie, TV and music material. Expandable to 5.1. *HCC #273*
- 

**Cabasse Stream BAR** → £850 ★★★★★  
 Soundbar/hi-res speaker that's blessed with real musicality, but doesn't fall short when it comes to energetic film soundtracks. HDMI in/out, but v1.4 only. *HCC #269*
- 

**Q Acoustics M3** → £300 ★★★★★  
 A 4in x 6in woofer is tucked away in the M3's eye-catching angular chassis, ensuring this well-priced soundbar has a full-range performance. Simple to use. Bluetooth streaming. *HCC #271*
- 

**DALI Kubik One** → £800 ★★★★★  
 The Danish speaker brand brings a slice of glamour to your setup with this stylish soundbar. No HDMI or digital decoding but it packs a tight, lively and nuanced sound. *HCC #269*
- 

**Sonos Playbase** → £700 ★★★★★  
 Although this features the same foibles as the Sonos Playbar (no Bluetooth, no HDMI, no DTS), this multiroom maestro looks good and sounds good. Detailed, with naturalistic bass. *HCC #273*
- 

**Orbitsound One P70** → £300 ★★★★★  
 Bluetooth-equipped soundbar that offers horizontal/vertical orientation by virtue of a flippable display and up-firing driver. Spacious sound with a good bass response. *HCC #272*
- 

**Acoustic Energy Aego Sound3ar** → £200 ★★★★★  
 Smallscale second-room option impresses with its punch and clarity, but a few EQ tweaks would have been nice. No HDMI connectivity. *HCC #264*

## TECH INFO: TV PLATFORMS



### TV addicts – go free, or pay-to-view?:

The analogue switch-off has created a competitive market in free-to-air platforms, while Sky and Virgin Media are squaring up to the likes of EE TV, Amazon Prime and Netflix. Deciding which service is right for you can be complex, and you may find your needs are best catered for by a combination.

**Sky+HD:** The long-running satcaster offers a plethora of HD channels, with content including recent movie releases, live sports and sought-after US shows. The new Sky Q hardware includes a 4K-capable PVR with multiple tuners for simultaneous recording/device streaming.

**Virgin Media TiVo:** The cable giant offers a three-tuner PVR (ITB) with intelligent TiVo recording tricks, catch-up apps (including Netflix and Spotify), and over 240 channels (depending on package). Premium Sky content can be added on a monthly basis.

**Freeview:** Common option when it comes to TVs and STBs. Freeview offers 13 HD channels plus SD and radio. Freeview Play adds IPTV integration to the EPG – and you'll find it on Panasonic and Finlux TVs.

**Freesat:** Satellite service offering a similar – but not identical – channel lineup to Freeview, delivered via a dish but without a subs cost. Budget-priced STBs are available.

**YouView:** This relatively new kid on the block integrates the UK's main catchup portals directly into a backwards EPG. Again, channels are broadly similar to Freeview and there's no contract. Humax (PVRs) and Sony (TVs) are leading the hardware charge.

## TOP 5 Back-catalogue Blu-rays



### Mulholland Drive

15 years after it first opened at UK cinemas, David Lynch's mindbending neo-noir finally gets the disc release it deserves thanks to the 4K restoration and encoding nous used on StudioCanal's Blu-ray do-over.

★★★★★



### Drunken Master

Jackie Chan's legendary kung-fu comedy kicks and punches its way into the Masters of Cinema Blu-ray lineup with a striking new restoration and enough audio options to satisfy even the fussiest fight fans.

★★★★★



### King Kong: Premium Collection

Fans will go ape for this HMV-exclusive platter of the classic monster movie, which lives up to its 'Premium Collection' billing thanks to an attractive encode and engrossing extras.

★★★★★



### The Big Heat

From the sheer clarity of its restored 1080p black-and-white visuals to the extensive array of extra features (including a chat track), this is a fantastic Blu-ray edition for Fritz Lang's masterful 1953 film noir.

★★★★★



### Crouching Tiger, Hidden Dragon [UHD Blu-ray]

An assured 4K debut for Ang Lee's Mandarin-language martial arts drama. Sony Pictures' restoration work reaps rewards; a new Dolby Atmos mix is another reason to buy.

★★★★★

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## TOP 5 PVRs



### Virgin Media TiVo, £subscription

This triple-tuner PVR offers recording flexibility, useful features – you can undelete deleted shows! – and smart TiVo functionality. If you're in a cable area, consider it

★★★★★



### Sky Q, £subscription

Sky's new top-tier product offering dazzles with its image-rich user interface, wireless multiroom skills and recording flexibility delivered by the PVR's 12 tuners. Now supports 4K content

★★★★★



### Humax HDR-1100S, £190

Freesat Freetime PVR that impresses with its usability, VOD options and form factor – Humax's small, white box will slot into any kit rack. We tested the 500GB version – 1TB and 2TB models are also available

★★★★★



### Humax DTR-T4000, £subscription

This YouView-based PVR is required to get BT Sport's new Ultra HD channel – available to those with BT fast fibre and a BT TV sub. Easy to use and with 1TB of storage

★★★★★



### EE TV Smart Box, £subscription

This quad-tuner 1TB PVR, from the mobile/broadband corp, offers innovative Replay 24-hour channel recording and great Smart device streaming. Needs more catch-up though

★★★★★

## TOP 5 Headphones



### Sony MDR-HW700DS, £800

Comfy cans supplied with an HDMI surround processor, enabling multichannel audio to be fed to a virtual 9.1-channel soundstage. The effect is superb – great for late-night listening

★★★★★



### Sony MDR-1000X, £360

Superior noise-cancelling cans with hi-res audio support via Sony's LDAC wireless transmission tech. Slick, touch-sensitive operation and healthy battery life. Fulsome sound and comfy to wear

★★★★★



### Lindy Cromo NCX-100, £100

A cost-effective domestic option and great for travelling, these noise-cancelling 'phones (which can also be used as a normal passive design) feature a pleasant, balanced sound

★★★★★



### PSB M4U1, £220

Aimed at both home and on-the-move use (and supplied with a carry case and two cable options), the M4U1s offer solid bass response and impactful highs. Build quality is good, as is comfort

★★★★★



### Bose QC35, £290

The latest in the QuietComfort range ditches the wired connection in favour of Bluetooth but retains Bose's luxurious styling and rich performance. Noise-cancelling mode is very efficient

★★★★★

## TOP 5 Wireless speakers



### KEF Muo, £300

Portable Bluetooth speaker that's a cut above much of the competition. KEF's sonic knowhow results in a punchy, dynamic presentation that cherishes lossless rips. Excellent build quality

★★★★★



### Sony SRS-X11, £60

An affordable palm-sized Bluetooth speaker with internal rechargeable battery, Sony's SRS-X11 is supremely portable and sounds decent for the money. A neat little gizmo. Get two and they can work in stereo

★★★★★



### Q Acoustics BT3, £280

Bluetooth stereo pair with optical input makes a good alternative to a soundbar (there's even a subwoofer pre-out) while remaining a dab hand at music. Neat and tidy design, good price

★★★★★



### Simple Audio Listen, £400

Desktop stereo speakers with Bluetooth support, these benefit from separate tweeter/midbass units and a classy construction. Performance is well-balanced, and a subwoofer output is offered for extra bass

★★★★★



### Denon HEOS 5 HS2, £350

The mid-range multiroom speaker gets a second-gen revamp, adding welcome hi-res audio playback and Bluetooth connectivity. Gorgeous looks, boisterous, room-filling sound

★★★★★

# HOME CINEMA

Choice

## → IN THE NEXT ISSUE

**Meet the Blu-ray encoder** We chat to the man who polishes bits for the UK's specialist BD labels  
**Denon, Marantz and more** AV products on the horizon from Sound United  
**Logan** Director James Mangold on one last ride

## → REVIEWS

**Sony and Philips OLED TVs** **Acer 4K PJ** **ATC Home Theatre Series 5.1** **Samsung M9500 4K BD player**  
**Tangent Spectrum 5.1** Soundbar roundup  
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CONTENTS SUBJECT TO CHANGE – BUT ONLY FOR THE BETTER



# AV Avenger

Clearer guidance for cinema-goers, advocates **Steve May**. Or he won't be responsible for having a popcorn-throwing fit the next time someone whips out their mobile phone during a movie

**I HAD SOME** time to kill recently in San Francisco, and thought it would be fun to catch a movie. *Kong: Skull Island* was playing at the local AMC Loews, and this seemed a reasonable way to pass the time.

Unfortunately a Kong-sized pancake stack meant that by the time I got to the theatre, the IMAX presentation had already begun. Luckily, the big gorilla was also about to play on a smaller screen.

However, my eye was drawn to a prominent 'DV' appended to the title on the billboard. I wondered what this could signify. My first thought was Dolby Vision, but the AMC has a dedicated Dolby Cinema, so that was unlikely. Curious, I asked the young woman dispensing tickets.

'Excuse me, what does DV on Screen 5 mean?'

She glanced up and stared at me, with the demeanour of someone rudely interrupted while chewing gum. Replying with a tone clearly reserved for the elderly or stupid, she explained: 'It means Digital Video. In the old days it used to be F-I-L-M' – she spelt it out for me, letter by letter, not actually saying 'film' – 'but now it's DV.'

F-I-L-M.

Was she being sarcastic? Did she actually think 'film' was F-I-L-M? I would never know. I sheepishly left the cinema, made to feel smaller than a puny human next to a towering ape.

## Blinded by the lights

As a rule of thumb, I like explanatory signage. It's always good to know what you're getting into. A cinema that was advertising a screening in Dolby Atmos would get my patronage over one that was not, for example, while a 3D banner would send me into a loop of indecision.

Personally, I would like to see such guidance extended further. 'This cinema leaves the house

lights on low for the entire duration of the movie, thereby destroying contrast and black levels onscreen' would be a good one. Some folks obviously like this, else why would a cinema do it? But I would prefer to be warned off beforehand.

Similarly, the caution: 'We have brightly illuminated Exit signs positioned either side of the screen in our shoe-box-shaped theatre' would be helpful. While a perennial green colour cast splashed onto the edges of a screen might be seen as advantageous for documentaries about The Pampas, I find it typically adds little to the work of professional colourists.

And while I'm partial to the odd cinema snack, I draw the line at *bijou* cinemas which offer table service during a movie. Call me old-fashioned, but I think there's a good argument for keeping fine dining and film-going two very separate pursuits.

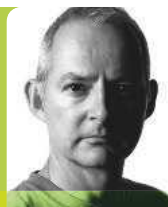
I'm lucky enough to see movies at press screenings as well as in the wild, where cinema etiquette is largely respected, but I did have palpitations at a screening of a particularly eagerly awaited blockbuster when **one scribe in front of me actually powered up a laptop**.

I honestly think he would have tapped out his review during the film if an usher, probably concerned that he was going to Facebook Live the movie, hadn't demanded he put the thing away.

Of course, in a home cinema you can do all of the above, without ever admitting your transgressions. And you don't need to install any explanatory signage, because you know your own rules. This is just one more point in the home cinema 'win' column. Just remember that if anyone asks what you're screening, the answer is 'B-L-U-R-A-Y' ■

*Popcorn? Peanuts? A full-blown roast dinner? Let us know your home cinema snack via [letters@homecinemachoice.com](mailto:letters@homecinemachoice.com)*

Before heading off to San Francisco, **Steve May** put flowers in his hair, pink lenses in his shades and three extra notches in his trouser belt







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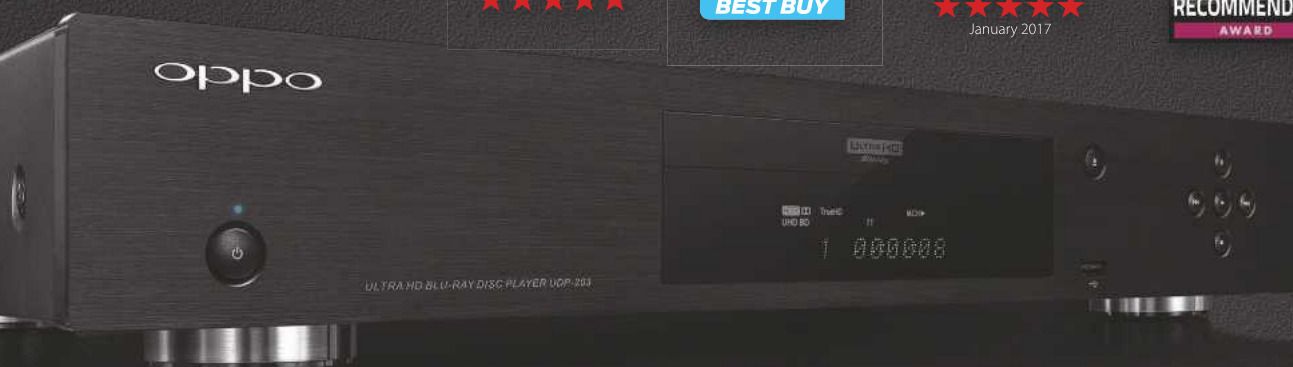
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